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<110> LEVINE, et al.

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gccaagcatt gttgaagggt gataagtctg tcagagttat gcgttctttg ctggctgcac    1680

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tgtcagatgt ggaacttatc ccgttgcctt tagaacccca agtgaaaatt agaggaataa    1860

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aacttattct tcaaatcatt tcactcatgg acaagctgtt acggaaagaa aatctggact    2040

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tccagtcagt tcctgtggct gaagttcttg atacagaggg aagcattcag aactttttta    2160

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acgttaaaag ctgtgctgga tattgcgtga tcacctatat acttggagtt ggagacaggc    2280

acctggataa ccttttgcta acaaaaacag gaggctgagg caggagaatc gcttgaaccc    2340

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<213>  Homo sapiens

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gcttggaagg gaagagagaa caaaagagtt ataaagctgt cctggaagac ccaatgttga     180

agttctcagg actatatcaa gagacatgct ctgatcttta tgttacttgt caagttttttg    240
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caacggtttc gctctttgga aaatacggca tgtttcgcca agggatgcat gacttgaaag    480

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gcactctctc agaagatcag atgagccgtc ttgccaagct caccaaagct catcgacaag    600

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cttattaccc ttaagaatta tttttctca tgctataaac acaaagatga tttaaaataa   1620

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ccgctcagaa cacagcccac ttggatcagt ttgaacgaat caagaccctc ggcacgggct   240

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tcctcgacaa acagaaggtg gtgaaactga acagatcga acacaccctg aatgaaaagc   360

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acatgcaggt ggtctcccag accctgtggg tttctgtttc ccctctgctg aggaatatgt   660

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cccttcttc taggatgcgc cgaaggattc tttttcttgc tcatatgctg ttagaaagcc        720

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tacaagttgc ctggggttca gtgctctaga aagttccaag gtttgtggct tgaattattc      240

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agccatccag gctgatacga aaactcccag aatttgctcc aggggaggag gagtcaggtg   1860

aggatgatgt ggtgggcagg gcgtcaaggg agaaacctca gcaagcatca ggtaggtatg   1920

acacgcctgc tcccagttca ttgcatctat ttttagtctc tgctaacctc ctgagaagtc   1980

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ttccaattct gcaaggcttt taaaattcac cttacatctt ttcaaagcaa gaaaatggaa   180

cagcatgtgt aggaattctt cgttgttgtt ttggagccct ctcttaagtc agaactctgt   240

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ggatatcaag catttgagga gttgaagca ccctaacatc atcgcattca agggtgtttg   960

tactcaggcc ccatgttatt gtattatcat ggaatactgt gcccatggac aactctacga   1020

ggtcttacga gctggcagga agatcacacc tcgattgcta gtagactggt ccacaggaat   1080

tgcaagtgga atgaattatt gcacctcca taaaattatt catcgtgatc tcaaatcacc   1140

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<213>   Homo sapiens

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cactgtaatg gttcgtttta atttttcatt ttggattttt ttttaatttc ctttgctact   180

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accacagacc tttatagcag cccgtatgat attattcaca ttatgatatg tgtttattat   1260

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tcaaggcttc ccagtccgca ggggatataa atactatcta ccagccccc gagcccagaa       660

gcaggcacct ctctgtcagc tcccagaacc ctggccgaag ctcacctccc cctggctatg      720

ttcctgagcg gcagcagcac attgcccggc aggggtccta caccagcatc aacagtgagg      780

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attccttgtc tggaagctgc caatccttgg acaggtcagc agacagccca tccttccgga      900

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aaactcagct ttatgacaaa ggggtcaaag gtggaaccta cccccggcgc taccacgtgt     1020

ctgtgcacca caaggactac agtgatggca agaacatt tccccgaata cggcgtcatc      1080

aaggcaactt gttcaccctg gtgccctcca ccgctccct gagcacaaat ggcgagaaca      1140

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<210>   21
<211>   1269
<212>   DNA
<213>   Homo sapiens

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ggcaccttcg gggaggtgtt caaggccagg caccgcaaga ccggccagaa ggtggctctg       240

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aagatccttc agcttctaaa acacgagaat gtggtcaact tgattgagat ttgtcgaacc       360

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aatcccgcca ccaccaacca gacggagttt gagcgcgtct ctgagggcc ggcgcttgcc        720

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cgcccaccag tgactttttc taagagctcc cggcgtggtg gaagagggga caggtccctc      1020

acccacccac aatcctattc tcgggctgag aaccctgcgt ggggacaggg ctcgcctcag      1080

gaatgggctg tttttggcct aaccctcaga aacactgggg ctggcacaaa ctcttggttt      1140

cttcaacagg agaattttac tgtgtttctt ttggttccat tgtttggaga cattcctggg      1200

cacagtttgg tccgttagaa ttaaaagttg aattttttt ttttttwaat ttttttttt       1260

ycccccaaa                                                             1269


<210>   22
<211>   623
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<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(623)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

<400> 22
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ggaccgagct cgggtgtatg gggccgtagg aaccggctcc ggggccccga taacgggccg   180

cccccacagc accccgggct ggcgtgaggg tctcccttga tctgagaatg gctacctctc   240

gatatgagcc agtggctgaa attggtgtcg gtgcctatgg gacagtgtac aaggcccgtg   300

atccccacag tggccacttt gtgccctcaa gagtgtgaga gtccccaatg gaggaggagg   360

tggaggaggc cttcccatca gcacagttcg tgaggtggct ttactgaggc gactggaggc   420

ttttgagcat cccaatgttg tccggctgat ggacgtctgt gccacatccc gaactgaccg   480

ggagatcaag gtaaccctgg tgtttgagca tgtagaccag gacctaagga catatctgga   540

caaggcaccc ccaccaggct tgccagccga aacgatcaag gtgagtgggg ttggtaggca   600

ttganaggtg gattgggacc ttt   623

<210> 23
<211> 502
<212> DNA
<213> Homo sapiens

<400> 23
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gggggcctct ctagcttgcg gcctgtgtct atggtcgggc cctctgcgtc cagctgctcc   120

ggaccgagct cgggtgtatg gggccgtagg aaccggctcc ggggccccga taacgggccg   180

cccccacagc accccgggct ggcgtgaggg tctcccttga tctgagaatg gctacctctc   240

gatatgagcc agtggctgaa attggtgtcg gtgcctatgg gacagtgtac aaggcccgtg   300

atccccacag tggccacttt gtgccctcaa gagtgtgaga gtccccaccc acctctcctt   360

ttgaggcttc tccttctcct tcccatttct ctacactaag gggtatgttc cctcttgtcc   420

ctttccctac ctttatattt ggggtccttt tttatacagg aaaaacaaaa caaagaaata   480

aagtcgacgc ggccgcgaat tc   502

<210> 24
<211> 1148
<212> DNA
<213> Homo sapiens

<220>
<221> -
<222> (1)..(1148)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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cctgggaaga ctcctttctg ctccccaaaa ccccaaggcc tggctcgggg ccactggagc   180

cgcaggcggg acatatgtgt gaccggccct ctgcccctgg cagccccgcg ctgtgtactg   240

taaggacgtg ctggacatcg agcagttctc cactgtgaag ggcgtcaatc tggaccacac   300

agacgacgac ttctactcca agttctccac gggctctgtg tccatcccat ggcaaaacga   360

gatgatagaa acagaatgct ttaaggagct gaacgtgttt ggacctaatg gtaccctccc   420

gccagatctg aacagaaacc accctccgga accgcccaag aaagggctgc tccagagact   480

cttcaagcgg cagcatcaga caattccaa gagttcgccc agctccaaga ccagtttaa   540

ccaccacata aactcaaacc atgtcagctc gaactccacc ggaagcagct agtttcggct   600

ctggcctcca agtccacagt ggaaccagcc cagacccttc tccttagaag tggaagtagt   660

ggagcccctg ctctggtggg gctgccaggg gagaccccgg gagccgggga aggaggccgt   720

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ccaattggat acgacaactt gcacgtattt taatagcgtc ataactagaa ctgaattttg   900

tctttatgat ttttaaagaa aagttttgta aatttctcta ctgtctcagt ttacattttg   960

tatatttgta tttaaatgaa agtgagactt tgagggtgta tattttctgt gcagccactg   1020

ttaagccatg tgttccaagg catttttagcg gggaggggt tatcaaaaaa aaaaaaatgt   1080

gactcaagac ttccagagcc tcaaatgaga aaatgtcttt attaaatgta gaaagtgatc   1140

catacttc   1148

<210> 25
<211> 1679
<212> DNA

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cctgctgtcc ccctcaggcc acattaggat ctcagacctg ggcttggctg tgaagatccc     360

cgagggagac ctgatccgcg gccgggtggg cactgttggc tacatggctc cagaggtcct     420

gaacaaccag aggtacggcc tgagccccga ctactggggc cttggctgcc tcatctatga     480

gatgatcgag ggccagtcgc cgttccgcgg ccgcaaggag aaggtgaagc gggaggaggt     540

ggaccgccgg gtcctggaga cggaggaggt gtactcccac aagttctccg aggaggccaa     600

gtccatctgc aagatgctgc tcacgaaaga tgcgaagcag aggctgggct gccaggagga     660

gggggctgca gaggtcaaga gacacccctt cttcaggaac atgaacttca gcgcttaga     720

agccgggatg ttggaccctc ccttcgttcc agaccccgc gctgtgtact gtaaggacgt     780

gctggacatc gagcagttct ccactgtgaa gggcgtcaat ctggaccaca cagacgacga     840

cttctactcc aagttctcca cgggctctgt gtccatccca tggcaaaacg agatgataga     900

aacagaatgc tttaaggagc tgaacgtgtt tggacctaat ggtaccctcc cgccagatct     960

gaacagaaac caccctccgg aaccgcccaa gaaagggctg ctccagagac tcttcaagcg    1020

gcagcatcag aacaattcca agagttcgcc cagctccaag accagtttta accaccacat    1080

aaactcaaac catgtcagct cgaactccac cggaagcagc tagtttcggc tctggcctcc    1140

aagtccacag tggaaccagc ccagaccctt ctccttagaa gtggaagtag tggagcccct    1200

gctctggtgg ggctgccagg ggagaccccg ggagccgggg aaggaggccg tccatcccgt    1260

cgacgtagaa cctcgaggtt tctcaaagaa atttccactc aggtctgttt ccgaggcgg     1320

ccccggccgg ggtggattgg atttgtcttt ggtgaacatt gcaatagaaa tccaattgga    1380

tacgacaact tgcacgtatt ttaatagcgt cataactaga actgaatttt gtctttatga    1440
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tttttaaaga aaagttttgt aaatttctct actgtctcag tttacatttt gtatatttgt    1500

atttaaatga aagtgagact ttgagggtgt atattttctg tgcagccact gttaagccat    1560

gtgttccaag gcattttagc gggggagggg ttatcaaaaa aaaaaaaatg tgactcaaga    1620

cttccagagc ctcaaatgag aaaatgtctt tattaaatgt agaaagtgat ccatacttc     1679


<210>   26
<211>   897
<212>   DNA
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(897)
<223>   "n" can be any nucleotide 'a', 'c' , 'g' or 't'


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atggcagatt ggggtccctg ttgtccttgg acagatgaga atgccgagag ctcgtatgcc     240

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cctgctgtcc ccctcaggcc acattaggat ctcagacctg ggcttggctg tgaagatccc     360

cgagggagac ctgatccgcg gccgggtggg cactgttggc tacatggctc cagaggtcct     420

gaacaaccag aggtacggcc tgagccccga ctactggggc cttggctgcc tcatctatga     480

gatgatcgag ggccagtcgc cgttccgcgg ccgcaaggag aaggtgaagc gggaggaggt     540

ggaccgccgg gtcctggaga cggaggaggt gtactcccac aagttctccg aggaggccaa     600

gtccatctgc aagatggtga gctcctggtg gccagatgcc accctcaagc tggtggctcc     660

cctccctggg cctggcccca gtctgtcccc agaacagcaa acaggctgaa gggacagggg     720

tctgagcatg ggggtggggg ttgcagccca ccaagctaga gttgagggca ctccttgctg     780

aggactgggg tggtcagcgg agacttccag gagaaagcct gggtggggca gggacaccca     840

gtaaccaagg gaagaggggt gaggggaaca gtgtggaaca ccctcacatc cagcctg       897


<210>   27
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<212>   DNA
<213>   Homo sapiens
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<400> 27

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cgaggcgaac cagcccttct gtgccgtgaa gatgaaggag gcgctcagca cagagcgtgg     180

gaaaacactg gtgcagaaga agccgaccat gtatcctgag tggaagtcga cgttcgatgc     240

ccacatctat gaggggcgcg tcatccagat tgtgctaatg cgggcagcag aggagccagt     300

gtctgaggtg accgtgggtg tgtcggtgct ggccgagcgc tgcaagaaga caatggcaa      360

ggctgagttc tggctggacc tgcagcctca ggccaaggtg ttgatgtctg ttcagtattt     420

cctggaggac gtggattgca aacagtctat gcgcagtgag gacgaggcca gttcccaac      480

gatgaaccgc cgcggagcca tcaaacaggc caaaatccac tacatcaaga accatgagtt     540

tatcgccacc ttctttgggc aacccacctt ctgttctgtg tgcaaagact ttgtctgggg     600

cctcaacaag caaggctaca aatgcaggca atgtaacgct gccatccaca agaaatgcat     660

cgacaagatc atcggcagat gcactggcac cgcggccaac agccgggaca ctatattcca     720

gaaagaacgc ttcaacatcg acatgccgca ccgcttcaag gttcacaact acatgagccc     780

caccttctgt gaccactgcg gcagcctgct cctgcccgct ccccacgata agcaccagtg     840

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tctggccggg ctctcatggt acttcctctg tgaactgtgt gtgaatctgc ttttcctctg     960

ccttcggagg gaaattgtaa atcctgtgtt tcattacttg aatgtagtta tctattgaaa    1020

atatatatta tatacataga catatatata tatataatag ctgtatata ttgctcagta    1080

gagaaaaacc atgggggact ggtgatatgt tgatcttttt caaaaaaata tatatatgac    1140

aaaaaaaaaa aaaaaggag cacaagctgt ttgaaccacc aggtttattt gtgtgtctaa    1200

ataaacacca aatagtacca aaaa                                          1224
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<210>   28
<211>   1424
<212>   DNA
<213>   Homo sapiens

<400>   28

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tatatataaa actaaggtaa caagttgtga ggagtgggta ggttggcttg atagtgggt      120

aggtagggtt ggaggaggca aatgatatgg tggaacaagg accttgaaat caatccaaaa     180

cccaggtttt cctaggaagg ccacccggaa cccatggtaa gccaactgtt gcgcagggat     240
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agtgcctcag caggagactt ggcagaaggc agacagaagg aagatgggaa cactggtagt      300

cctggcagcg ttgaggaggc tccagcagag atccagtgct aagggcccta gaggggctgg      360

tggcatcccc tcaatcttgg tcctctctcc ccagagttgt gtgggacccc agggtatcta      420

gcgccagaga tccttaaatg ctccatggat gaaacccacc caggctatgg caaggaggtc      480

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aagggttttg atcattccag ctcctctggg ctctggcctc aggcccacta atgatcctgc     1260

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gctggggtgg aagggagcca ttctgaacgc cacgcctggc ccggtcagtg ctgcatgcac     1380

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<210>  29
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<213>  Homo sapiens

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gcctagcgag cctgccggtc gaccccagcc agcgcagcga cggggcgctg cctggcccag      180

gcgcacacgg aagtgcgctt ctctgaagta gctttggaaa gtagagaaga aaatccagtt      240

tgcttcttgg agaacactgg acagctgaat aaatgcagta tctaaatata aaagaggact      300
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gcaatgccat ggctttctgt gctaaaatga ggagctccaa gaagactgag gtgaacctgg     360

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tagggatggc tgtcctggcc atctcacact atgccatgat gaagaagatg cagttgccag     900

aactgcccaa ggacatcagc tacaagcgat atattccaga aacattgaat aagtccatca     960

gacagaggaa ccttctcacc aggatgcgga taaataatgt tttcaaggat ttcctaaagg    1020

aatttaacaa caagaccatt tgtgacagca gcgtgtccac gcatgacctg aaggtgaaat    1080

acttggctac cttggaaact ttgacaaaac attacggtgc tgaaatattt gagacttcca    1140

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ttctctacta cgaagtgatg gtgactggga tcttggaat ccagtggagg cataaaccaa    1260

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acaagaagga tgaggagaaa aacaagatcc gggaagagtg gaacaatttt tcattcttcc    1380

ctgaaatcac tcacattgta ataaaggagt ctgtggtcag cattaacaag caggacaaca    1440

agaaaatgga actgaagctc tcttcccacg aggaggcctt gtcctttgtg tccctggtag    1500

atggctactt ccggctcaca gcagatgccc atcattacct ctgcaccgac gtggcccccc    1560

cgttgatcgt ccacaacata cagaatggct gtcatggtcc aatctgtaca gaatacgcca    1620

tcaataaatt gcggcaagaa ggaagcgagg aggggatgta cgtgctgagg tggagctgca    1680

ccgactttga caacatcctc atgaccgtca cctgctttga gaagtctgag caggtgcagg    1740

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acggttcgga ccgcagcttc cccagcttgg agacctcat gagccacctc aagaagcaga    1860

tcctgcgcac ggataacatc agcttcatgc taaaacgctg ctgccagccc aagccccgag    1920

gttcgtctcc ctgtgccaga gccaggctgt atcccatcag taatgtgctg agacccagat    1980
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<210>   30
<211>   1609
<212>   DNA
<213>   Homo sapiens

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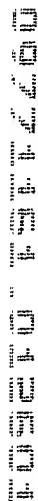
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tttttcctta cgttgtacaa caaatgtgga aagaaaaaaa aaacagaaaa agtgtatccc   600

atcttaatga aaatgactgc ggcagtcaag agtttcaaat ccagctgcca ggggtgaaag   660

caaccctctg catctctgaa agatttcatc agtgttatct cctttataat cataactttt   720

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ggttgggttc agaagagggg agaatatata aaaaactgga ggccaagata cttccttttg   240

aagacagatg gctcattcat aggatataaa gagaaacctc aagatgtgga tttaccttat   300

cccctcaaca acttttcagt ggcaaaatgc cagttaatga aaacagaacg accaaagcca   360

aacacattta taatcagatg tctccagtgg actactgtta tagagagaac atttcatgta   420

gatactccag aggaaaggga agaatggaca gaagctatcc aggctgtagc agacagactg   480

cagaggcaag aagaggagag aatgaattgt agtccaactt cacaaattga taatataggа   540

gaggaagaga tggatgcctc tacaacccat cataaaagaa agacaatgaa tgattttgac   600

tatttgaaac tactaggtaa aggcactttt gggaaagtta ttttggttcg agagaaggca   660

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gatttattaa agttgattac taaatttttg tttgcagtgt gcatgtgttt gtgggctcat   780

gaatttacat gctaatgtat gcaaattcca ttaaacaacc naaatatggt tgnagactac   840

tgctacagta atttttgtgt attaatattt gtaattttta aagttttcag acattcataa   900

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agattttgga ctttgcaaag aagggatcac agatgcagcc accatgaaga cattctgtgg   540

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tgagacagat actagatatt ttgatgaaga atttacagct cagactatta caataacacc   960

acctgaaaaa tatgatgagg atggtatgga ctgcatggac aatgagaggc ggccgcattt   1020

ccctcaattt tcctactctg caagtggacg agaataagtc tctttcattc tgctacttca   1080

ctgtcatctt caatttatta ctgaaaatga ttcctggaca tcaccagtcc tagctcttac   1140

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caattatcat cttttgatct tttagttttt ccctcagtga aggctaaatg agatacactg    1440

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gtttataaat tcagaacaag caattgtgga agggtggtgg cgtgcatatg taaagcacat    1560

cagatccgtg cgtgaagtag gcatatatca ctaagctgtg gctggaattg attaggaagc    1620

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cgggcaatca tgagcaagtg aacactgttc taccaagaac tgaaggcata tgcacagtca    1800

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ggaaaccttt tttccttctt gacatttatc acctctgatg gctgaagaat gtagacaggt    1920

ataatgatac tgcttttcac caaaatttct acaccaaggt aaacaggtgt ttgccttatt    1980

taattttta ctttcagttc tacgtgaatt agcttttct cagatgttga aactttgaat       2040

gtccttttat gattttgttt atattgcagt agtatttatt ttttagtgat gagaattgta    2100

tgtcatgtta gcaaacgcag ctccaactta tataaaatag acttactgca gttactttg     2160

acccatgtgc aaggattgta cacgctgatg agaatcatgc acttttctc ctctgttaaa      2220

aaaaatgata aggctctgaa atggaatata ttggttagaa tttggctttg ggagaagaga    2280

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tccgcccct tcccgcctcc ccgtatataa gacttcgccg agcactctca ctcgcacaag       180

tggaccgggg tgttgggtgc tagtcggcac cagaggcaag ggtgcgagga ccacggccgg    240

ctcggacgtg tgaccgcgcc taggggtgg cagcgggcag tgcggggcgg caaggcgacc       300
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atggagcttt tgcggactat cacctaccag ccagccgcca gcaccaaaat gtgcgagcag     360

gcgctgggca agggttgcgg agggaactcg aagaagaagc ggccgccgca gcccccgag      420

gaatcgcagc cacctcagtc ccaggcgcaa gtgcccccgg cggcccctca ccaccatcac     480

caccattcgc actcggggcc ggagatctcg cggattatcg tcgaccccac gactgggaag     540

cgctactgcc ggggcaaagt gctgggaaag ggtggctttg caaaatgtta cgagatgaca     600

gatttgacaa ataacaaagt ctacgccgca aaaattattc ctcacagcag agtagctaaa     660

cctcatcaaa gggaaaaggt gtgtatgact cttgagtaaa gtattttctt tgtgtgcaag     720

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tgactggaag ctaataag                                                   798


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atggagcttt tgcggactat cacctaccag ccagccgcca gcaccaaaat gtgcgagcag     360

gcgctgggca agggttgcgg agggaactcg aagaagaagc ggccgccgca gcccccgag      420

gaatcgcagc cacctcagtc ccaggcgcaa gtgcccccgg cggcccctca ccaccatcac     480

caccattcgc actcggggcc ggagatctcg cggattatcg tcgaccccac gactgggaag     540

cgctactgcc ggggcaaagt gctgggaaag ggtggctttg caaaatgtta cgagatgaca     600

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cctcatcaaa gggaaaagat tgacaaagaa atagagcttc acagaattct tcatcataag     720

catgtagtgc agttttacca ctacttcgag gacaaagaaa acatttacat tctcttggaa     780

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ggacatgtgg tggtacgaaa acaattcccc tgtggcctgc tggactgggt ggaaccagaa   900

caggctaagg catacagttc ttgactttgg acaatccaag agtgaaccag aatgcagttt   960

tccttgagat acctgtttta aaaggttttt cagacaattt gcagaaagg tgcattgatt   1020

cttaaattct ctctgttgag agcatttcag ccagaggact ttggaactgt gaatatactt   1080

cctgaagggg agggagaagg gaggaagctc ccatgttgtt taaaggctgt aattggagca   1140

gcttttggct gcgtaactgt gaactatggc catatataat tttttttcat taatttttga   1200

agatacttgt ggctggaaaa gtgcattcct tgttaataaa ctttttattt attacagccc   1260

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<211> 538
<212> DNA
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tgacaataag cgctacctct tcatccagaa actgggggag ggtgggttca gctatgtgga   240

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gcagcaggac cgggaggagg cccagcgaga agccgacatg catcgcctct tcaatcaccc   360

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ttgtttttga agctaaaaac aaagtagatg actgcaatta tgctatcaag aggatccgtc   2040

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gaaatggatc atatatatta caactaactt cttcaactat ggactttta agcctaatga       3060

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ggagagcgtc gggcgggagg cggtggtcct gggagcggcc ccggcgcccg aagccgcccc      180

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ttgtatcaga tccagaagat attacagatt gcccaaggac tccagatact ccaaataatg      720

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aacttaaagt aaaacaaggt gcagagaata tgatacagat gtattcaaat ggatcttcaa      840

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caaaacctgt gataagtcct cttgaacttc ggatggaaga attaaggcat cattttagga     1020

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atgtacgcat ccctcaacta gcacctccag ctaggtatgt gtctgagatt ttaagcatct    2040

cttatacaaa gttattggga cattcttacg tactgattat agcaggtgta ctgagtcttg    2100

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gctttaattt taaagctgtt taaaatacag actttctatt actgttttgg tgagttactt    2220

tatcttctat aagctgattc tacagtaacc aaattggact ttgatcttga gcctgaacct    2280

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atgaattagc aataaaagca tcatagtgaa taaggcgtgt ctttccattt aaaattgcca    2460

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gcataattcc tcttcactga atgaattagc aataaaagca tcatagtgaa taaggcgtgt     2220
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tcgtgtagct ggaagacacc aacttcctga caggagcttt atttcatttg ggatttcaag      180

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tcagataagt ggaactattg agttacataa agaaaataga tttgcatttg tcaggcagac     1320

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tcgtgtagct ggaagacacc aacttcctga caggagcttt atttcatttg ggatttcaag    180

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aactattgag ttacataaag aaaatagatt tgcatttgtc aggcagacgt ttatacaaca   1980

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ttgggagcat ggcagacagg gaagggaaac attttcaggg aaaagacatg tatcacatgt    2040

cttcagaagc aagtcaggtt tcatgtaacc gagtgtcctc ttgcgtgtcc aaaagtagcc    2100

cagggctgta gcacaggctt cacagtgatt ttgtgttcag ccgtgagtca cactacatgc    2160

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<212> DNA
<213> Homo sapiens

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tacagcccgg gcaattcagt ttctacatca ggacagcccc agcctcatcc atggagacat     180

caagagttcc aacgtccttc tggatgagag gctgacaccc aagctgggag actttggcct     240

ggcccggttc agccgctttg ccgggtccag ccccagccag agcagcatgg tggcccggac     300
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acagacagtg cggggcaccc tggcctacct gcccgaggag tacatcaaga cgggaaggct    360

ggctgtggac acggacacct tcagctttgg ggtggtagtg ctagagacct ggctggtca    420

gagggctgtg aagacgcacg gtgccaggac caagtatctg aaagacctgg tggaagagga    480

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gcccgggccc tgccacctga gctgggcctg ggcctgggcc agctggcctg ctgctgcctg    660

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acgcttgtgg tcccagctgc tggggaggct gaagtaggag gatcatttat gcttgggagg   1980
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ccctgtttca aaaagaaaaa ccctgggaaa agtgaagtat ggctgtaagt ctcatggttc    2100

agtcctagca agaagcgaga attctgagat cctccagaaa gtcgagcagc acccacctcc    2160

aacctcgggc cagtgtcttc aggctttact ggggacctgc gagctggcct aatgtggtgg    2220

cctgcaagcc aggccatccc tgggcgccac agacgagctc cgagccaggt caggcttcgg    2280

aggccacaag ctcagcctca ggcccaggca ctgattgtgg cagaggggcc actacccaag    2340

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catgtatcac atgtcttcag aagcaagtca ggtttcatgt aaccgagtgt cctcttgcgt    2460

gtccaaaagt agcccagggc tgtagcacag gcttcacagt gattttgtgt tcagccgtga    2520

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<212>   DNA
<213>   Homo sapiens

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ggtgtatgct gtgaagaggc tgaaggagaa cgctgacctg gagtggactg cagtgaagca     840
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gagcttcctg accgaggtgg agcagctgtc caggtttcgt cacccaaaca ttgtggactt   900

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cttgagtaat aaaaacgtat gttgcaatct cgggaaa   1237

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<211> 1286
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(1286)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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tgctttagac catctacata gcctgggaat aatttataga gacttaaaac cagaaaatat   180

acttcttgat gaagaaggtc acatcaagtt aacagatttc ggcctaagta aagagtctat   240

tgaccatgaa aagaaggcat attcttttg tggaactgtg gagtatatgg ctccagaagt   300

agttaatcgt cgaggtcata ctcagagtgc tgactggtgg tcttttggtg tgttaatgtt   360

tgaaatgctt actggtacac tcccttttcca aggaaaagat cgaaaagaaa caatgactat   420

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acgaatgctt ttcaagcgaa atcctgcaaa cagattaggt gcaggaccag atggagttga   540

agaaattaaa agacattcat ttttctcaac gatagactgg aataaactgt atagaagaga   600

aattcatccg ccatttaaac ctgcaacggg caggcctgaa gatacattct attttgatcc   660

tgagtttact gcaaaaactc ccaaagattc acctggcatt ccacctagtg ctaatgcaca   720

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tgatggatat gaagtaaaag aagatattgg agttggctcc tactctgttt gcaagagatg   900

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tatacataaa gctacaaaca tggagtttgc agtgaaggta aattttttt  atttaaaatg        960

caattcatac agttcttgtt catgcatgtc agtaccagtt aaaaattaca ctccccttgt       1020

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ttaatctaga accctgtgag ctaaaggtaa ggtggttata tatctagttt tcccagagca       1140

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<212>  DNA
<213>  Homo sapiens

<220>
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<223>  "n" can be any nucleotide 'a', 'c' , 'g' or 't'


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caaactgaag aagtcagtat caaagaaatt gcaatcacac atcatgtaaa ggaaggacat        180

gaaaaggcag atccttccca gtttgaactt ttaaaagtat tagggcaggg atcatttgga        240

aaggttttct tagttaaaaa aatctcaggc tctgatgcta ggcagcttta tgccatgaag        300

gtattgaaga aggccacact gaaagttcga gaccgagttc ggacaaaaat ggaacgtgat        360

atcttggtag aggttaatca tccttttatt gtcaagttgc attatgcttt tcaaactgaa        420

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ttagaccatc tacatagcct gggaataatt tatagagact taaaaccaga aaagtaagga        600

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<210>  85
<211>  1826
<212>  DNA
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<213> Homo sapiens

<400> 85

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cgaaggacaa gttgcttcag atatgtattg cctagttggt cgaatctaca agatatgtt     1560

tttggactct aatttcacgg acactgaaag cagagaccat ggagcttctt ggttcaaaaa    1620
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ggcatttgaa tctgagccaa cactacagtc aggaattaat tatgcggtcc tcctcctggc   1680

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atttctacat ggaaatcaag aaactcggac ccaacttggt gcaaagacgg atctccgccg   1800

attctgacgg ctctccaggt tttgtc   1826

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<211> 476
<212> DNA
<213> Homo sapiens

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ctgcaaatgt ctttcgtgga agacataagt ggatgttcaa atgagagaat ttgaagtgtt   180

gaaaaaactc aatcacaaaa atattgtcaa attatttgct attgaagagg agacaacaac   240

aagacataaa gtacttatta tggaattttg tccatgtggg agtttataca ctgttttaga   300

agaaccttct aatgcctatg gactaccaga atctgaattc ttaattgttt tgcgagatgt   360

ggtgggtgga atgaatcatc tacgagagaa tggtatagtg caccgtgata tcaagccagg   420

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<210> 87
<211> 2131
<212> DNA
<213> Homo sapiens

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<222> (1)..(2131)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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cgggagctgg tcctcatgaa gtgtgtgaac cataaaaaca ttattagttt attaaatgtc   360

ttcacacccc agaaaacgct ggaggagttc caagatgttt acttagtaat ggaactgatg   420

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ttaaaaccaa gtaacattgt agtcaagtct gattgcacat tgaaaatcct ggactttgga      600

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agagcccctg aggtcatcct ggggatgggc tacaaggaga cgtggatat atggtctgtg       720

ggatgcatta tgggagaaat ggttcgccac aaaatcctct ttccaggaag ggactatatt      780

gaccagtgga ataaggtaat tgaacaacta ggaacaccat gtccagaatt catgaagaaa      840

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cccaaactct tcccagattc cctcttccca gcggactccg agcacaataa actcaaagcc      960

agccaagcca gggacttgtt gtcaaagatg ctagtgattg acccagcaaa aagaatatca     1020

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gcgcctccac ctcagatata tgacaagcag ttggatgaaa gagaacacac aattgaagaa     1140

tggaaagaac ttatctacaa ggaagtaatg aattcagaag aaaagactaa aaatggtgta     1200

gtaaaaggac agccttctcc ttcagcacag gtgcagcagt gaacagcagt gagagtctcc     1260

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cctgcctgcg aaacccagcg ttcttcagga gatgatgtga tggaacacac acacgcag      1440

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atggctgcaa aaccggcaac ctgtaactgc cctttttaaat ggcatgacaa ggtgtgcagt     1740

ggccccatcc agcatgtgtg tgtctctatc ttgcatctac ctgctccttg gcctagtcag     1800

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gctactgtca gtgtcctcag ggctctacca agacataatg cactggggta ccacatggtc     1920

catttcatgt gatctattac tctgacataa acccatctgt aatatattgc cagtatataa     1980

gctgtttagt ttgttaattg attaaactgt atgtcttata agaaacatg taaaggggga     2040

atatatgggg ggagtgagct ctctcagacc cttgaagatg tagcttccaa atttgaatgg     2100
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<210>  88
<211>  989
<212>  DNA
<213>  Homo sapiens

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acaagtggat gtgtcatata ttgccaaaca ttacaacatg agcaaaagca aagttgacaa     360

ccagttctac agtgtggaag tgggagactc aaccttcaca gttctcaagc gctaccagaa     420

tctaaagcct attggctctg gggctcaggg catagtttgt gccgcgtatg atgctgtcct     480

tgacagaaat gtggccatta agaagctcag cagaccctt cagaaccaaa cacatgccaa      540

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caatatgcta cattcgattt cattgtcctc atggtagctt tctgcttaaa aatcacctaa     780

aaaccatatg atgtggaagt gatgaatttt ataaatattt ccctagttag aaaatttacc     840

atatttggtt atcttgctcc aaattgagag cttcaagaaa gaaacaagac aaacaaagcc     900

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ctccagcctg ggcaacaaga gcgaaactcc atctcaaaaa gaaaaaaaaa gatatatatg     180

tgtgacttac aggtacaggt aaagttgctt ctggttttct ggttgttgca tggtatttcc     240
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tatgcagcca caggtcttta ttttcttact taagtgcctc caacttccca taacacaaat      300

taaggcatga tgaacatcct ctctgtgctg aacatcctgt gtatgtcact tcagaagcct      360

gtgtgacggt ttctttagtc tttataccta ggggtgggat ttctgggtca taggacagta      420

atttatattt atttcactaa gtattctctt tctctggctt ttgttacata ttacctgttt      480

gtcctccaga aaacttgcac caatttacat tcctaccaat agggtaggag agtgcacaat      540

gggtggattc taactccaaa tctaacacct cttctttct ttgtttctag cagccatggc      600

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gaccaaagtg acactggaga attttatag caaccttatc gctcaacatg aagaacgaga      720

aatgagacaa aagaagttag aaaaggtgat ggaagaagaa ggcctaaaag atgaggagaa      780

acgactccgg agatcagcac atgctcggaa ggaaacagag tttcttcgtt tgaagagaac      840

aagacttgga ttggaagatt ttgagtcctt aaaagtaata ggcagaggag catttggtga      900

ggtacggctt gttcagaaga aagatacggg acatgtgtat gcaatgaaaa tactccgtaa      960

agcagatatg cttgaaaaag agcaggttgg ccacattcgt gcggagcgtg acattctagt     1020

ggaggcagac agtttgtggg ttgtgaaaat gttctatagt tttcaggata agctaaacct     1080

ctacctaatc atggagttcy tgcctggagg ggacatgatg accttgttga tgaaaaaaga     1140

cactctgacg aagaggagac tcagttttat atagcagaaa cagtattagc catagactct     1200

attcaccaac ttggattcat ccacagagac atcaaaccag acaaccttct tttggacagc     1260

aagggccatg tgaaactttc tgactttggt ctttgcacag gactgaaaaa agcacatagg     1320

acagaatttt ataggaatct gaaccacagc ctccccagtg atttcacttt ccagaacatg     1380

aattccaaaa ggaaagcaga aacctggaaa agaaatagac gtcagctagc cttctccaca     1440

gtaggcactc ctgactacat tgctcctgag gtgttcatgc agaccgggta caacaagctc     1500

tgtgattggt ggtcgcttgg ggtgatcatg tatgagatgc tcatcggtaa gttgcatggt     1560

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caattggcag tgatctaagt gatttccta cttgtctttc aaagtgaatt gttttagaca     1680

gatgacacct ctttcagtaa gatgtatccc actccattct tgggcttact ggcatcctgc     1740

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<210>    90
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<211> 2732
<212> DNA
<213> Homo sapiens

<220>
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<222> (1)..(2732)
<223> "n" can be any nucleotide 'a', 'c' , 'g' or 't'

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tagcaacaat tcttaaagag gttttggaag gcttagacta tctacacaga aacggtcaga   180

ttcacaggga tttgaaagct ggtaatattc ttctgggtga ggatggttca gtacaaatag   240

cagattttgg ggtaagtgcg ttcctagcaa cagggggtga tgttacccga aataaagtaa   300

gaaaaacatt cgttggcacc ccatgttgga tggctcctga agtcatggaa caggtgagag   360

gctatgactt caaggctgac atgtggagtt ttggaataac tgccattgaa ttagcaacag   420

gagcagcgcc ttatcacaaa tatcctccca tgaaagtgtt aatgttgact ttgcaaaatg   480

atccacccac tttggaaaca ggggtagagg ataaagaaat gatgaaaaag tacggcaagt   540

cctttagaaa attactttca ctgtgtcttc agaaagatcc ttccaaaagg cccacagcag   600

cagaactttt aaaatgcaaa ttcttccaga aagccaagaa cagagagtac ctgattgaga   660

agctgcttac aagaacacca gacatagccc aaagagccaa aaaggtaaga agagttcctg   720

ggtcaagtgg tcaccttcat aaaaccgaag acggggactg ggagtggagt gacgacgaga   780

tggatgagaa gagcgaagaa gggaaagcag ctttttctca ggaaaagtca cgaagagtaa   840

aagaagaaaa tccagagatt gcagtgagtg ccagcaccat ccccgaacaa atacagtccc   900

tctctgtgca cgactctcag ggcccaccca atgctaatga agactacaga gaagcttctt   960

cttgtgccgt gaacctcgtt ttgagattaa gaaactccag aaaggaactt aatgacatac  1020

gatttgagtt tactccagga agagatacag cagatggtgt atctcaggag ctcttctctg  1080

ctggcttggt ggatggtcac gatgtagtta tagtggctgc taatttacag aagattgtag  1140

atgatcccaa agctttaaaa acattgacat ttaagttggc ttctggctgt gatgggtcgg  1200

agattcctga tgaagtgaag ctgattgggt ttgctcagtt gagtgtcagc tgatgtatgt  1260

cccttgatgt caccctgatc tgtcatgccc caccgccacc cctactccct tcaaccctcc  1320

ctctttctgc ccatttcctc ccaccccctc actcccattt cctagcaaaa tcagaagatt  1380
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tccgagttct gctttattct ctagcaatcc acagtacaag aacaagcaaa tgccacagct   1500

gcacgactgt tgctcatttt tccaaaagct atttaatatt cttagcaatc aatttggata   1560

tcccttaagt gaaaagaatc tgaaatacac tcaggtggtc ttatttattg gcaacaaaag   1620

gaattttcta tccagaagcc tatttctcct ttcattgttg ttatttctgt tataatactt   1680

taattgtaca tctgacaata ctgcctcttt tatgttgtat ttagaaatta atatacttat   1740

aaaattaaga tttattagcc aaacttgaat tctagtttta aaactgactg tgaatttttat   1800

ttttcatata tttatgcatt acacaccttа gctataagaa aaaaagggtt ttgattatat   1860

gcttcttgca gttaatctcg ttatttaaac aaaaagtttt gggtctgtct ttggagtatt   1920

tgtaacttct aaattttgaa atgactgaat taggaatttg gatgcttatt cttttagtct   1980

gtttgcctaa aaaccaattt acaatctgac tgtctcttgg gagagggagg tgccttgcaa   2040

actttcacat taagaatgtg cctgaggctg ctttactctg gaatagtctc agatctaaaa   2100

tttcctctat ataaggtggc atatgttaag ttttgcttca ttggaccgtt tagaatgcta   2160

tgtaaaatgt tgccattctg ttagattgct aactatatac ccatctctga tttggctctc   2220

cttaagtgat aggatttgtt attctaaagg tgataaactt gaaaatatca gaatctgagt   2280

tttacttgaa attttgcaga atacccaggt ggagtgaaaa ttggaagggt tttgtgcaat   2340

gactaaaagg taaaacgctg ttaaggttca agaatcaata ctttcaaccc aagtagccct   2400

ctgcttgact gtatattatg gaactagtaa accttaggat tttgaaaatt ggagtctaat   2460

ctttcaagga ggtgggctcc caggatggta ccattgctct ttcctagcta accctagata   2520

tggcagctct ttaatgtact tcaaaaagca aatatatatt actaaggaaa aaaagttatt   2580

tataattgcc ttgtcataat tgttaaggtg ttctagagcc atttgcatac aatttaatgt   2640

aatttcattc cattctattg tttacacaac gattactcga agatgactgc aaaggtaaaa   2700

ggaaaataaa agtgtattgc acaatgaaaa aa   2732

<210> 91
<211> 1416
<212> DNA
<213> Homo sapiens

<220>
<221> misc_feature
<222> (1)..(1416)
<223> "n" may be any nucleotide 'a', 'c', 'g' or 't'

<400> 91

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tagcaacaat tcttaaagag gttttggaag gcttagacta tctacacaga aacggtcaga     180

ttcacaggga tttgaaagct ggtaatattc ttctgggtga ggatggttca gtacaaatag     240

cagattttgg ggtaagtgcg ttcctagcaa cagggggtga tgttacccga aataaagtaa     300

gaaaaacatt cgttggcacc ccatgttgga tggctcctga agtcatggaa caggtgagag     360

gctatgactt caaggctgac atgtggagtt ttggaataac tgccattgaa ttagcaacag     420

gagcagcgcc ttatcacaaa tatcctccca tgaaagtgtt aatgttgact ttgcaaaatg     480

atccacccac tttggaaaca ggggtagagg ataaagaaat gatgaaaaag tacggcaagt     540

cctttagaaa attactttca ctgtgtcttc agaaagatcc ttccaaaagg cccacagcag     600

cagaactttt aaaatgcaaa ttcttccaga aagccaagaa cagagagtac ctgattgaga     660

agctgcttac aagaacacca gacatagccc aaagagccaa aaaggtaaga agagttcctg     720

ggtcaagtgg tcaccttcat aaaaccgaag acggggactg ggagtggagt gacgacgaga     780

tggatgagaa gagcgaagaa gggaaagcag cttttctca ggaaaagtca cgaagagtaa     840

aagaagaaaa tccagagatt gcagtgagtg ccagcaccat ccccgaacaa atacagtccc     900

tctctgtgca cgactctcag ggcccaccca atgctaatga agactacaga gaagcttctt     960

cttgtgccgt gaacctcgtt ttgagattaa gaaactccag aaaggaactt aatgacatac    1020

gatttgagtt tactccagga agagatacag cagatggtgt atctcaggag ctcttctctg    1080

ctggcttggt ggatggtcac gatgtagtta tagtggctgc taatttacag aagattgtag    1140

atgatcccaa agctttaaaa acattgacat ttaagttgaa tcaatttttg catttggaag    1200

catttgactc tgcagcgtta gggaacgttt tctgattgtg actggaagtg tcctcttcta    1260

tgagcatagc tttttcttat cgtcacacct ttgactaaga gcggccatat aagaatcttg    1320

aagcctagat cattttgctt gcagtttgta ttgcaacttg accataaaga caaaattaca    1380

ctgaattcaa agcaacactc ttaataaagc tttcct                              1416
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<211> 434
<212> PRT
<213> Homosapiens

<400> 92

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            20   25   30

Leu Phe Val Ser Thr Leu Asp Gly Ser Leu His Ala Val Ser Lys Arg
        35   40   45

Thr Gly Ser Ile Lys Trp Thr Leu Lys Glu Asp Pro Val Leu Gln Val
    50   55   60

Pro Thr His Val Glu Glu Pro Ala Phe Leu Pro Asp Pro Asn Asp Gly
65   70   75   80

Ser Leu Tyr Thr Leu Gly Ser Lys Asn Asn Glu Gly Leu Thr Lys Leu
            85   90   95

Pro Phe Thr Ile Pro Glu Leu Val Gln Ala Ser Pro Cys Arg Ser Ser
            100   105   110

Asp Gly Ile Leu Tyr Met Gly Lys Lys Gln Asp Ile Trp Tyr Val Ile
        115   120   125

Asp Leu Leu Thr Gly Glu Lys Gln Gln Thr Leu Ser Ser Ala Phe Ala
    130   135   140

Asp Ser Leu Cys Pro Ser Thr Ser Leu Leu Tyr Leu Gly Arg Thr Glu
145   150   155   160

Tyr Thr Ile Thr Met Tyr Asp Thr Lys Thr Arg Glu Leu Arg Trp Asn
            165   170   175

Ala Thr Tyr Phe Asp Tyr Ala Ala Ser Leu Pro Glu Asp Glu Gly Asp
            180   185   190

Tyr Lys Met Ser His Phe Val Ser Asn Gly Asp Gly Leu Val Val Thr
        195   200   205

Val Asp Ser Glu Ser Gly Asp Val Leu Trp Ile Gln Asn Tyr Ala Ser
    210   215   220

Pro Val Val Ala Phe Tyr Val Trp Gln Arg Glu Gly Leu Arg Lys Val
225   230   235   240

Met His Ile Asn Val Ala Val Glu Thr Leu Arg Tyr Leu Thr Phe Met
            245   250   255

Ser Gly Glu Val Gly Arg Ile Thr Lys Trp Lys Tyr Pro Phe Pro Lys
            260   265   270

Glu Thr Glu Ala Lys Ser Lys Leu Thr Pro Thr Leu Tyr Val Gly Lys
    275   280   285

Tyr Ser Thr Ser Leu Tyr Ala Ser Pro Ser Met Val His Glu Gly Val
    290   295   300

Ala Val Val Pro Arg Gly Ser Thr Leu Pro Leu Leu Glu Gly Pro Gln
305   310   315   320

Thr Asp Gly Val Thr Ile Gly Asp Lys Gly Glu Cys Val Ile Thr Pro
                325   330   335

Ser Thr Asp Val Lys Phe Asp Pro Gly Leu Lys Ser Lys Asn Lys Leu
            340   345   350

Asn Tyr Leu Arg Asn Tyr Trp Leu Leu Ile Gly His His Glu Thr Pro
        355   360   365

Leu Ser Ala Ser Thr Lys Met Leu Glu Arg Phe Pro Asn Asn Leu Pro
        370   375   380

Lys His Arg Glu Asn Val Ile Pro Ala Asp Ser Glu Lys Lys Ser Phe
385   390   395   400

Glu Glu Thr Leu Leu Gln Met Thr Ser Val Phe Ser Trp Ile Leu Asn
            405   410   415

Leu Pro Ser Lys Glu Glu Val Phe Ala Phe Leu Arg Ile Phe Glu Lys
        420   425   430

Asn Met

<210>   93
<211>   232
<212>   PRT
<213>   Homo sapiens

<400>   93

Met Tyr Ser Leu Gln Leu Gln Ser Val Ser Ser Ala Ile His Leu Cys
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Asp Lys Lys Lys Met Glu Leu Ser Leu Asn Ile Pro Val Asn His Gly
            20   25   30

Pro Gln Glu Glu Ser Cys Gly Ser Ser Gln Leu His Glu Asn Ser Gly
        35   40   45

Ser Pro Glu Thr Ser Arg Ser Leu Pro Ala Pro Gln Asp Asn Asp Phe
    50   55   60

Leu Ser Arg Lys Ala Gln Asp Cys Tyr Phe Met Lys Leu His His Cys
65   70   75   80

Pro Gly Asn His Ser Trp Asp Ser Thr Ile Ser Gly Ser Gln Arg Ala
            85   90   95

Ala Phe Cys Asp His Lys Thr Thr Pro Cys Ser Ser Ala Ile Ile Asn
            100   105   110

Pro Leu Ser Thr Ala Gly Asn Ser Glu Arg Leu Gln Pro Gly Ile Ala

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         115                      120                        125
Gln Gln Trp Ile Gln Ser Lys Arg Glu Asp Ile Val Asn Gln Met Thr
    130                     135              140

Glu Ala Cys Leu Asn Gln Ser Leu Asp Ala Leu Leu Ser Arg Asp Leu
145                     150              155                  160

Ile Met Lys Glu Asp Tyr Glu Leu Val Ser Thr Lys Pro Thr Arg Thr
                165              170                  175

Ser Lys Val Arg Gln Leu Leu Asp Thr Thr Asp Ile Gln Gly Glu Glu
            180              185                  190

Phe Ala Lys Val Ile Val Gln Lys Leu Lys Asp Asn Lys Gln Met Gly
            195                 200                  205

Leu Gln Pro Tyr Pro Glu Ile Leu Val Val Ser Arg Ser Pro Ser Leu
    210                 215                  220

Asn Leu Leu Gln Asn Lys Ser Met
225                 230

<210>   94
<211>   209
<212>   PRT
<213>   Homo spaiens

<400>   94

Met Ala Asp Leu Glu Ala Val Leu Ala Asp Val Ser Tyr Leu Met Ala
1               5                   10                  15

Met Glu Lys Ser Lys Ala Thr Pro Ala Ala Arg Ala Ser Lys Lys Ile
            20              25                  30

Leu Leu Pro Glu Pro Ser Ile Arg Ser Val Met Gln Lys Tyr Leu Glu
        35              40                  45

Asp Arg Gly Glu Val Thr Phe Glu Lys Ile Phe Ser Gln Lys Leu Gly
    50              55                  60

Tyr Leu Leu Phe Arg Asp Phe Cys Leu Asn His Leu Glu Glu Ala Arg
65                  70              75                      80

Pro Leu Val Glu Phe Tyr Glu Glu Ile Lys Lys Tyr Glu Lys Leu Glu
                85                  90                  95

Thr Glu Glu Glu Arg Val Ala Arg Ser Arg Glu Ile Phe Asp Ser Tyr
            100             105                 110

Ile Met Lys Glu Leu Leu Ala Cys Ser His Pro Phe Ser Lys Ser Ala
        115                 120                 125

Thr Glu His Val Gln Gly His Leu Gly Lys Lys Gln Val Pro Pro Asp
    130                     135                 140
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Leu Phe Gln Pro Tyr Ile Glu Glu Ile Cys Gln Asn Leu Arg Gly Asp
145   150   155   160

Val Phe Gln Lys Phe Ile Glu Arg Val Ala Leu Ala Ala Gly Ala Ala
                165   170   175

Thr Leu Pro Ala Val Pro Ser Cys Pro Asn Pro Gln His Pro Gly Ser
            180   185   190

Gly Thr Thr Ala Arg His Leu Gln Val Gly Pro Tyr Trp Pro Arg Leu
        195   200   205

Ala

<210>   95
<211>   454
<212>   PRT
<213>   Homo sapiens

<400>   95

Met Gly Leu Val Ser Ser Lys Lys Pro Asp Lys Glu Lys Pro Ile Lys
1   5   10   15

Glu Lys Asp Lys Gly Gln Trp Ser Pro Leu Lys Val Ser Ala Gln Asp
            20   25   30

Lys Asp Ala Pro Pro Leu Pro Pro Leu Val Val Phe Asn His Leu Thr
        35   40   45

Pro Pro Pro Pro Asp Glu His Leu Asp Glu Asp Lys His Phe Val Val
    50   55   60

Ala Leu Tyr Asp Tyr Thr Ala Met Asn Asp Arg Asp Leu Gln Met Leu
65   70   75   80

Lys Gly Glu Lys Leu Gln Val Leu Lys Gly Thr Gly Asp Trp Trp Leu
                85   90   95

Ala Arg Ser Leu Val Thr Gly Arg Glu Gly Tyr Val Pro Ser Asn Phe
            100   105   110

Val Ala Arg Val Glu Ser Leu Glu Met Glu Arg Trp Phe Phe Arg Ser
        115   120   125

Gln Gly Arg Lys Glu Ala Glu Arg Gln Leu Leu Ala Pro Ile Asn Lys
    130   135   140

Ala Gly Ser Phe Leu Ile Arg Glu Ser Glu Thr Asn Lys Gly Ala Phe
145   150   155   160

Ser Leu Ser Val Lys Asp Val Thr Thr Gln Gly Glu Leu Ile Lys His
                165   170   175

Tyr Lys Ile Arg Cys Leu Asp Glu Gly Gly Tyr Tyr Ile Ser Pro Arg
            180   185   190

Ile Thr Phe Pro Ser Leu Gln Ala Leu Val Gln His Tyr Ser Ser Tyr
    195   200   205

Tyr Lys Asn Asn Met Lys Val Ala Ile Lys Thr Leu Lys Glu Gly Thr
    210   215   220

Met Ser Pro Glu Ala Phe Leu Gly Glu Ala Asn Val Met Lys Ala Leu
225   230   235   240

Gln His Glu Arg Leu Val Arg Leu Tyr Ala Val Val Thr Lys Glu Pro
            245   250   255

Ile Tyr Ile Val Thr Glu Tyr Met Ala Arg Gly Cys Leu Leu Asp Phe
            260   265   270

Leu Lys Thr Asp Glu Gly Ser Arg Leu Ser Leu Pro Arg Leu Ile Asp
            275   280   285

Met Ser Ala Gln Ile Ala Glu Gly Met Ala Tyr Ile Glu Arg Met Asn
            290   295   300

Ser Ile His Arg Asp Leu Arg Ala Ala Asn Ile Leu Val Ser Glu Ala
305   310   315   320

Leu Cys Cys Lys Ile Ala Asp Phe Gly Leu Ala Arg Ile Ile Asp Ser
            325   330   335

Glu Tyr Thr Ala Gln Glu Gly Ala Lys Phe Pro Ile Lys Trp Thr Ala
            340   345   350

Pro Glu Ala Ile His Phe Gly Val Phe Thr Ile Lys Ala Asp Val Trp
            355   360   365

Ser Phe Gly Val Leu Leu Met Glu Val Val Thr Tyr Gly Arg Val Pro
            370   375   380

Tyr Pro Gly Met Ser Asn Pro Glu Val Ile Arg Asn Leu Glu Arg Gly
385   390   395   400

Tyr Arg Met Pro Arg Pro Asp Thr Cys Pro Pro Glu Leu Tyr Arg Gly
            405   410   415

Val Ile Ala Glu Cys Trp Arg Ser Arg Pro Glu Glu Arg Pro Thr Phe
            420   425   430

Glu Phe Leu Gln Ser Val Leu Glu Asp Phe Tyr Thr Ala Thr Glu Arg
            435   440   445

Gln Tyr Glu Leu Gln Pro
    450

<210>   96
<211>   82
<212>   PRT
<213>   Homo sapiens

<400> 96

Met Glu Asn Phe Gln Lys Val Glu Lys Ile Gly Glu Gly Thr Tyr Gly
1   5   10   15

Val Val Tyr Lys Ala Arg Asn Lys Leu Thr Gly Glu Val Val Ala Leu
            20   25   30

Lys Lys Ile Arg Leu Asp Thr Glu Thr Glu Gly Val Pro Ser Thr Ala
            35   40   45

Ile Arg Glu Ile Ser Leu Leu Lys Glu Leu Asn His Pro Asn Ile Val
        50   55   60

Lys Leu Leu Asp Val Ile His Thr Glu Asn Lys Asn Ile Ser Leu Lys
65   70   75   80

Glu Gly

<210>   97
<211>   118
<212>   PRT
<213>   Homo sapiens

<400>   97

Met Thr Arg Asp Glu Ala Leu Pro Asp Ser His Ser Ala Gln Asp Phe
1   5   10   15

Tyr Glu Asn Tyr Glu Pro Lys Glu Ile Leu Gly Arg Gly Val Ser Ser
            20   25   30

Val Val Arg Arg Cys Ile His Lys Pro Thr Ser Gln Glu Tyr Ala Val
            35   40   45

Lys Val Ile Asp Val Thr Gly Gly Gly Ser Phe Ser Pro Glu Glu Val
        50   55   60

Arg Glu Leu Arg Glu Ala Thr Leu Lys Glu Val Asp Ile Leu Arg Lys
65   70   75   80

Val Ser Gly His Pro Asn Ile Ser Ile Gln Leu Lys Asp Thr Tyr Glu
                85   90   95

Thr Asn Thr Phe Phe Phe Leu Val Phe Asp Leu Met Lys Arg Gly Glu
            100   105   110

Leu Phe Asp Leu Pro His
        115

<210>   98
<211>   167
<212>   PRT
<213>   Homo sapiens

<400>   98

Val Phe Leu Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn
1   5   10   15

Arg Ile Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr
            20   25   30

Gln Thr Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu
        35   40   45

Lys Asp Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu
    50   55   60

Arg Leu Arg His Pro Asn Ile Val Glu Leu Lys Glu Val Val Val Gly
65   70   75   80

Asn His Leu Glu Ser Ile Phe Leu Val Met Gly Tyr Cys Glu Gln Asp
            85   90   95

Leu Ala Ser Leu Leu Glu Asn Met Pro Thr Pro Phe Ser Glu Ala Gln
            100   105   110

Val Lys Cys Ile Val Leu Gln Val Leu Arg Gly Leu Gln Tyr Leu His
        115   120   125

Arg Asn Phe Ile Ile His Arg Asp Leu Lys Val Ser Asn Leu Leu Met
        130   135   140

Thr Asp Lys Gly Cys Val Lys Thr Gly Gly Cys Asn Leu Gly Gln Ala
145   150   155   160

Trp Ser Leu Asp Gly Thr Trp
                165

<210>   99
<211>   141
<212>   PRT
<213>   Homo sapiens

<400>   99

Met Ser Ser Ala Gly Gly Val Ser Arg Arg Leu Ala Ala Val Arg Ser
1   5   10   15

Thr Val Leu Cys Arg Ala Val Gly Cys Ile Leu Ala Glu Leu Leu Ala
            20   25   30

His Arg Pro Leu Leu Pro Gly Thr Ser Glu Ile His Gln Ile Asp Leu
        35   40   45

Ile Val Gln Leu Leu Gly Thr Pro Ser Glu Asn Ile Trp Pro Gly Phe
    50   55   60

Ser Lys Leu Pro Leu Val Gly Gln Tyr Ser Leu Arg Lys Gln Pro Tyr
65   70   75   80

Asn Asn Leu Lys His Lys Phe Pro Trp Leu Ser Glu Ala Gly Leu Arg

Leu Leu His Phe Leu Phe Met Tyr Asp Pro Lys Lys Arg Ala Thr Ala
        100   105   110

Gly Asp Cys Leu Glu Ser Ser Tyr Phe Lys Glu Lys Pro Leu Arg Leu
        115   120   125

Pro Ile Ser Gly Val Cys Glu Gly Cys Arg Glu Pro Gly
    130   135   140

<210> 100
<211> 119
<212> PRT
<213> Homo sapiens

<400> 100

Val Phe Leu Gly Arg Cys Arg Ser Val Lys Glu Phe Glu Lys Leu Asn
1   5   10   15

Arg Ile Gly Glu Gly Thr Tyr Gly Ile Val Tyr Arg Ala Arg Asp Thr
            20   25   30

Gln Thr Asp Glu Ile Val Ala Leu Lys Lys Val Arg Met Asp Lys Glu
        35   40   45

Lys Asp Gly Ile Pro Ile Ser Ser Leu Arg Glu Ile Thr Leu Leu Leu
    50   55   60

Arg Leu Arg His Pro Asn Ile Leu Pro Ala Arg Ala Pro Trp Lys Gly
65   70   75   80

Arg Ser Gly Gly Ser Ile Arg Gly Cys Arg Gly Leu Met Trp Ser Ser
            85   90   95

Ser Leu Cys Trp Lys Cys Ala Thr Thr Ala Ser Trp Glu Glu Trp Trp
        100   105   110

Val Gln Ser Pro Arg Cys Leu
        115

<210> 101
<211> 756
<212> PRT
<213> Homo sapiens

<400> 101

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp
1   5   10   15

Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln
            20   25   30

Lys Ser Tyr Lys Ala Val Leu Glu Asp Pro Met Leu Lys Phe Ser Gly
        35   40   45

```
Leu Tyr Gln Glu Thr Cys Ser Asp Leu Tyr Val Thr Cys Gln Val Phe
    50              55                  60

Ala Glu Gly Lys Pro Leu Ala Leu Pro Val Arg Thr Ser Tyr Lys Ala
65              70                  75                  80

Phe Ser Thr Arg Trp Asn Trp Asn Glu Trp Leu Lys Leu Pro Val Lys
                85              90                  95

Tyr Pro Asp Leu Pro Arg Asn Ala Gln Val Ala Leu Thr Ile Trp Asp
            100             105                 110

Val Tyr Gly Pro Gly Lys Ala Val Pro Val Gly Gly Thr Thr Val Ser
        115             120                 125

Leu Phe Gly Lys Tyr Gly Met Phe Arg Gln Gly Met His Asp Leu Lys
    130             135                 140

Val Trp Pro Asn Val Glu Ala Asp Gly Ser Glu Pro Thr Lys Thr Pro
145             150                 155                 160

Gly Arg Thr Ser Ser Thr Leu Ser Glu Asp Gln Met Ser Arg Leu Ala
            165             170                 175

Lys Leu Thr Lys Ala His Arg Gln Gly His Met Val Lys Val Asp Trp
            180             185                 190

Leu Asp Arg Leu Thr Phe Arg Glu Ile Glu Met Ile Asn Glu Ser Val
    195             200                 205

Lys Arg Ser Ser Asn Phe Met Tyr Leu Met Gly Gly Phe Arg Cys Val
    210             215                 220

Lys Cys Asp Asp Lys Glu Tyr Gly Ile Val Tyr Tyr Glu Lys Asp Gly
225             230                 235                 240

Asp Glu Ser Ser Pro Ile Leu Thr Ser Phe Glu Leu Val Lys Val Pro
            245             250                 255

Asp Pro Gln Met Ser Leu Glu Asn Leu Val Glu Ser Lys His His Asn
            260             265                 270

Leu Pro Arg Ser Leu Arg Ser Gly Pro Ser Asp His Asp Leu Lys Pro
    275             280                 285

Tyr Pro Ser Pro Arg Asp Gln Leu Lys Asn Ile Val Ser Tyr Pro Pro
    290             295                 300

Ser Lys Pro Pro Thr Tyr Glu Glu Gln Asp Leu Val Trp Glu Phe Arg
305             310                 315                 320

Tyr Tyr Leu Thr Asn Gln Asp Lys Ala Leu Thr Lys Ile Leu Thr Ser
            325             330                 335

Val Ile Trp Asp Leu Pro Gln Glu Ala Lys Gln Ala Leu Ala Leu Leu
            340             345                 350
```

```
Gly Lys Trp Asn Pro Met Asp Val Glu Asp Ser Leu Glu Leu Ile Ser
    355             360             365

Ser His Tyr Thr Asn Pro Thr Val Arg Arg Tyr Ala Val Ala Arg Leu
    370             375             380

Arg Gln Ala Asp Asp Glu Asp Leu Leu Met Tyr Leu Leu Gln Leu Val
385             390             395             400

Gln Ala Leu Lys Tyr Glu Asn Phe Asp Asp Ile Lys Asn Gly Leu Glu
            405             410             415

Pro Thr Lys Lys Asp Ser Gln Ser Ser Val Ser Glu Asn Val Ser Asn
            420             425             430

Ser Gly Ile Asn Ser Ala Glu Ile Asp Ser Ser Gln Ile Ile Thr Ser
        435             440             445

Pro Leu Pro Ser Val Ser Ser Pro Pro Ala Ser Lys Thr Lys Glu
    450             455             460

Val Pro Asp Gly Glu Asn Leu Glu Gln Asp Leu Cys Thr Phe Leu Ile
465             470             475             480

Ser Arg Ala Cys Lys Asn Ser Thr Leu Ala Asn Tyr Leu Tyr Trp Tyr
            485             490             495

Val Ile Val Glu Cys Glu Asp Gln Asp Thr Gln Gln Arg Asp Pro Lys
        500             505             510

Thr His Glu Met Tyr Leu Asn Val Met Arg Arg Phe Ser Gln Ala Leu
    515             520             525

Leu Lys Gly Asp Lys Ser Val Arg Val Met Arg Ser Leu Leu Ala Ala
    530             535             540

Gln Gln Thr Phe Val Asp Arg Leu Val His Leu Met Lys Ala Val Gln
545             550             555             560

Arg Glu Ser Gly Asn Arg Lys Lys Lys Asn Glu Arg Leu Gln Ala Leu
            565             570             575

Leu Gly Asp Asn Glu Lys Met Asn Leu Ser Asp Val Glu Leu Ile Pro
            580             585             590

Leu Pro Leu Glu Pro Gln Val Lys Ile Arg Gly Ile Ile Pro Glu Thr
    595             600             605

Ala Thr Leu Phe Lys Ser Ala Leu Met Pro Ala Gln Leu Phe Phe Lys
    610             615             620

Thr Glu Asp Gly Gly Lys Tyr Pro Val Ile Phe Lys His Gly Asp Asp
625             630             635             640

Leu Arg Gln Asp Gln Leu Ile Leu Gln Ile Ile Ser Leu Met Asp Lys
            645             650             655
```

Leu Leu Arg Lys Glu Asn Leu Asp Leu Lys Leu Thr Pro Tyr Lys Val
          660   665   670

Leu Ala Thr Ser Thr Lys His Gly Phe Met Gln Phe Ile Gln Ser Val
          675   680   685

Pro Val Ala Glu Val Leu Asp Thr Glu Gly Ser Ile Gln Asn Phe Phe
          690   695   700

Arg Lys Tyr Ala Pro Ser Glu Asn Gly Pro Asn Gly Ile Ser Ala Glu
705   710   715   720

Val Met Asp Thr Tyr Val Lys Ser Cys Ala Gly Tyr Cys Val Ile Thr
              725   730   735

Tyr Ile Leu Gly Val Gly Asp Arg His Leu Asp Asn Leu Leu Leu Thr
          740   745   750

Lys Thr Gly Gly
          755

<210> 102
<211> 508
<212> PRT
<213> Homo sapiens

<400> 102

Met Gly Glu Ala Glu Lys Phe His Tyr Ile Tyr Ser Cys Asp Leu Asp
1   5   10   15

Ile Asn Val Gln Leu Lys Ile Gly Ser Leu Glu Gly Lys Arg Glu Gln
              20   25   30

Lys Ser Tyr Lys Ala Val Leu Glu Asp Pro Met Leu Lys Phe Ser Gly
          35   40   45

Leu Tyr Gln Glu Thr Cys Ser Asp Leu Tyr Val Thr Cys Gln Val Phe
          50   55   60

Ala Glu Gly Lys Pro Leu Ala Leu Pro Val Arg Thr Ser Tyr Lys Ala
65   70   75   80

Phe Ser Thr Arg Trp Asn Trp Asn Glu Trp Leu Lys Leu Pro Val Lys
              85   90   95

Tyr Pro Asp Leu Pro Arg Asn Ala Gln Val Ala Leu Thr Ile Trp Asp
              100   105   110

Val Tyr Gly Pro Gly Lys Ala Val Pro Val Gly Gly Thr Thr Val Ser
          115   120   125

Leu Phe Gly Lys Tyr Gly Met Phe Arg Gln Gly Met His Asp Leu Lys
          130   135   140

Val Trp Pro Asn Val Glu Ala Asp Gly Ser Glu Pro Thr Lys Thr Pro

```
        145                      150                      155                      160
Gly Arg Thr Ser Ser Thr Leu Ser Glu Asp Gln Met Ser Arg Leu Ala
                165                      170                      175

Lys Leu Thr Lys Ala His Arg Gln Gly His Met Val Lys Val Asp Trp
                180                      185                      190

Leu Asp Arg Leu Thr Phe Arg Glu Ile Glu Met Ile Asn Glu Ser Val
                195                      200                      205

Lys Arg Ser Ser Asn Phe Met Tyr Leu Met Gly Gly Phe Arg Cys Val
        210                      215                      220

Lys Cys Asp Asp Lys Glu Tyr Gly Ile Val Tyr Tyr Glu Lys Asp Gly
225                      230                      235                      240

Asp Glu Ser Ser Pro Ile Leu Thr Ser Phe Glu Leu Val Lys Val Pro
                245                      250                      255

Asp Pro Gln Met Ser Leu Glu Asn Leu Val Glu Ser Lys His His Asn
                260                      265                      270

Leu Pro Arg Ser Leu Arg Ser Gly Pro Ser Asp His Asp Leu Lys Pro
                275                      280                      285

Tyr Pro Ser Pro Arg Asp Gln Leu Lys Asn Ile Val Ser Tyr Pro Pro
        290                      295                      300

Ser Lys Pro Pro Thr Tyr Glu Glu Gln Asp Leu Val Trp Glu Phe Arg
305                      310                      315                      320

Tyr Tyr Leu Thr Asn Gln Asp Lys Ala Leu Thr Lys Ile Leu Thr Ser
                325                      330                      335

Val Ile Trp Asp Leu Pro Gln Glu Ala Lys Gln Ala Leu Ala Leu Leu
                340                      345                      350

Gly Lys Trp Asn Pro Met Asp Val Glu Asp Ser Leu Glu Leu Ile Ser
                355                      360                      365

Ser His Tyr Thr Asn Pro Thr Val Arg Arg Tyr Ala Val Ala Arg Leu
        370                      375                      380

Arg Gln Ala Asp Asp Glu Asp Leu Leu Met Tyr Leu Leu Gln Leu Val
385                      390                      395                      400

Gln Ala Leu Lys Tyr Glu Asn Phe Asp Asp Ile Lys Asn Gly Leu Glu
                405                      410                      415

Pro Thr Lys Lys Asp Ser Gln Ser Ser Val Ser Glu Asn Val Ser Asn
                420                      425                      430

Ser Gly Ile Asn Ser Ala Glu Ile Asp Ser Ser Gln Ile Ile Thr Ser
        435                      440                      445

Pro Leu Pro Ser Val Ser Ser Pro Pro Pro Ala Ser Lys Thr Lys Glu
```

```
                450                    455                    460

        Val Pro Asp Gly Glu Asn Leu Glu Gln Asp Leu Cys Thr Phe Leu Ile
        465                 470                 475                 480

        Ser Arg Ala Cys Lys Asn Ser Thr Leu Ala Asn Tyr Leu Tyr Trp Tyr
                        485                 490                 495

        Val Lys Ile Ile Phe Cys Leu Phe Ser Tyr Tyr Pro
                    500                 505
```

<210> 103
<211> 140
<212> PRT
<213> Homo sapiens

<400> 103

```
        Met Gly Asn Ala Ala Ala Ala Lys Lys Gly Ser Glu Gln Glu Ser Val
        1               5                   10                  15

        Lys Glu Phe Leu Ala Lys Ala Lys Glu Asp Phe Leu Lys Lys Trp Glu
                        20                  25                  30

        Ser Pro Ala Gln Asn Thr Ala His Leu Asp Gln Phe Glu Arg Ile Lys
                        35                  40                  45

        Thr Leu Gly Thr Gly Ser Phe Gly Arg Val Met Leu Val Lys His Lys
                50                  55                  60

        Glu Thr Gly Asn His Tyr Ala Met Lys Ile Leu Asp Lys Gln Lys Val
        65                  70                  75                  80

        Val Lys Leu Lys Gln Ile Glu His Thr Leu Asn Glu Lys Arg Ile Leu
                        85                  90                  95

        Gln Ala Val Asn Phe Pro Phe Leu Val Lys Leu Glu Phe Ser Phe Lys
                        100                 105                 110

        Asp Asn Ser Asn Leu Tyr Met Val Met Glu Tyr Val Pro Gly Gly Glu
                    115                 120                 125

        Met Phe Ser His Leu Arg Arg Ile Gly Arg Phe Arg
                130                 135                 140
```

<210> 104
<211> 156
<212> PRT
<213> Homo sapiens

<400> 104

```
        Met Val Val Phe Asn Gly Leu Leu Lys Ile Lys Ile Cys Glu Ala Val
        1               5                   10                  15

        Ser Leu Lys Pro Thr Ala Trp Ser Leu Arg His Ala Val Gly Pro Arg
                        20                  25                  30
```

Pro Gln Thr Phe Leu Leu Asp Pro Tyr Ile Ala Leu Asn Val Asp Asp
        35   40   45

Ser Arg Ile Gly Gln Thr Ala Thr Lys Gln Lys Thr Asn Ser Pro Ala
    50   55   60

Trp His Asp Glu Phe Val Thr Asp Val Cys Asn Gly Arg Lys Ile Glu
 65   70   75   80

Leu Ala Val Phe His Asp Ala Pro Ile Gly Tyr Asp Asp Phe Val Ala
                85   90   95

Asn Cys Thr Ile Gln Phe Glu Glu Leu Leu Gln Asn Gly Ser Arg His
            100   105   110

Phe Glu Asp Trp Ile Asp Leu Glu Pro Glu Gly Arg Val Tyr Val Ile
        115   120   125

Ile Asp Leu Ser Gly Ser Ser Gly Glu Val Lys Ile Pro Asn Ser Ala
    130   135   140

Phe Cys Glu Arg Glu Arg Val Glu Met Arg His Ser
145   150   155

<210>   105
<211>   520
<212>   PRT
<213>   Homo sapiens

<400>   105

Met Ile Leu Ile Pro Arg Met Leu Leu Val Leu Phe Leu Leu Leu Pro
1   5   10   15

Ile Leu Ser Ser Ala Lys Ala Gln Val Asn Pro Ala Ile Cys Arg Tyr
            20   25   30

Pro Leu Gly Met Ser Gly Gly Gln Ile Pro Asp Glu Asp Ile Thr Ala
        35   40   45

Ser Ser Gln Trp Ser Glu Ser Thr Ala Ala Lys Tyr Gly Arg Leu Asp
    50   55   60

Ser Glu Glu Gly Asp Gly Ala Trp Cys Pro Glu Ile Pro Val Glu Pro
65   70   75   80

Asp Asp Leu Lys Glu Phe Leu Gln Ile Asp Leu His Thr Leu His Phe
            85   90   95

Ile Thr Leu Val Gly Thr Gln Gly Arg His Ala Gly Gly His Gly Ile
            100   105   110

Glu Phe Ala Pro Met Tyr Lys Ile Asn Tyr Ser Arg Asp Gly Thr Arg
        115   120   125

Trp Ile Ser Trp Arg Asn Arg His Gly Lys Gln Val Leu Asp Gly Asn

```
                130                    135                    140

Ser Asn Pro Tyr Asp Ile Phe Leu Lys Asp Leu Glu Pro Pro Ile Val
145                     150                    155                    160

Ala Arg Phe Val Arg Phe Ile Pro Val Thr Asp His Ser Met Asn Val
                165                    170                    175

Cys Met Arg Val Glu Leu Tyr Gly Cys Val Trp Leu Asp Gly Leu Val
                180                    185                    190

Ser Tyr Asn Ala Pro Ala Gly Gln Gln Phe Val Leu Pro Gly Gly Ser
        195                    200                    205

Ile Ile Tyr Leu Asn Asp Ser Val Tyr Asp Gly Ala Val Gly Tyr Ser
        210                    215                    220

Met Thr Glu Gly Leu Gly Gln Leu Thr Asp Gly Val Ser Gly Leu Asp
225                     230                    235                    240

Asp Phe Thr Gln Thr His Glu Tyr His Val Trp Pro Gly Tyr Asp Tyr
                245                    250                    255

Val Gly Trp Arg Asn Glu Ser Ala Thr Asn Gly Tyr Ile Glu Ile Met
                260                    265                    270

Phe Glu Phe Asp Arg Ile Arg Asn Phe Thr Thr Met Lys Val His Cys
        275                    280                    285

Asn Asn Met Phe Ala Lys Gly Val Lys Ile Phe Lys Glu Val Gln Cys
        290                    295                    300

Tyr Phe Arg Ser Glu Ala Ser Glu Trp Glu Pro Asn Ala Ile Ser Phe
305                     310                    315                    320

Pro Leu Val Leu Asp Asp Val Asn Pro Ser Ala Arg Phe Val Thr Val
                325                    330                    335

Pro Leu His His Arg Met Ala Ser Ala Ile Lys Cys Gln Tyr His Phe
                340                    345                    350

Ala Asp Thr Trp Met Met Phe Ser Glu Ile Thr Phe Gln Ser Asp Ala
        355                    360                    365

Ala Met Tyr Asn Asn Ser Glu Ala Leu Pro Thr Ser Pro Met Ala Pro
        370                    375                    380

Thr Thr Tyr Asp Pro Met Leu Lys Val Asp Asp Ser Asn Thr Arg Ile
385                     390                    395                    400

Leu Ile Gly Cys Leu Val Ala Ile Ile Phe Ile Leu Leu Ala Ile Ile
                405                    410                    415

Val Ile Ile Leu Trp Arg Gln Phe Trp Gln Lys Met Leu Glu Lys Ala
                420                    425                    430

Ser Arg Arg Met Leu Asp Asp Glu Met Thr Val Ser Leu Ser Leu Pro
```

Ser Asp Ser Ser Met Phe Asn Asn Asn Arg Ser Ser Ser Pro Ser Glu
    450   455   460

Gln Gly Ser Asn Ser Thr Tyr Asp Arg Ile Phe Pro Leu Arg Pro Asp
465   .   470   475   480

Tyr Gln Glu Pro Ser Arg Leu Ile Arg Lys Leu Pro Glu Phe Ala Pro
                485   490   495

Gly Glu Glu Glu Ser Gly Glu Asp Asp Val Val Glu Gln Gly Val Lys
                500   505   510

Gly Glu Thr Ser Ala Ser Ile Arg
        515   520

<210>   106
<211>   284
<212>   PRT
<213>   Homo sapiens

<400>   106

Met Ala Asn Phe Gln Glu His Leu Ser Cys Ser Ser Ser Pro His Leu
1   5   10   15

Pro Phe Ser Glu Ser Lys Thr Phe Asn Gly Leu Gln Asp Glu Leu Thr
            20   25   30

Ala Met Gly Asn His Pro Ser Pro Lys Leu Leu Glu Asp Gln Gln Glu
        35   40   45

Lys Gly Met Val Arg Thr Glu Leu Ile Glu Ser Val His Ser Pro Val
    50   55   60

Thr Thr Thr Val Leu Thr Ser Val Ser Glu Asp Ser Arg Asp Gln Phe
65   70   75   80

Glu Asn Ser Val Leu Gln Leu Arg Glu His Asp Glu Ser Glu Thr Ala
                85   90   95

Val Ser Gln Gly Asn Ser Asn Thr Val Asp Gly Glu Ser Thr Ser Gly
            100   105   110

Thr Glu Asp Ile Lys Ile Gln Phe Ser Arg Ser Gly Ser Gly Ser Gly
            115   120   125

Gly Phe Leu Glu Gly Leu Phe Gly Cys Leu Arg Pro Val Trp Asn Ile
    130   135   140

Ile Gly Lys Ala Tyr Ser Thr Asp Tyr Lys Phe Met Gln Gln Asp Thr
145   150   155   160

Trp Glu Val Pro Phe Glu Glu Ile Ser Glu Leu Gln Trp Leu Gly Ser
                165   170   175

```
Gly Ala Gln Gly Ala Val Phe Leu Gly Lys Phe Arg Ala Glu Glu Val
        180                 185                 190

Ala Ile Lys Lys Val Arg Glu Gln Asn Glu Thr Asp Ile Lys His Leu
        195                 200                 205

Arg Lys Leu Lys His Pro Asn Ile Ile Ala Phe Lys Gly Val Cys Thr
        210                 215                 220

Gln Ala Pro Cys Tyr Cys Ile Ile Met Glu Tyr Cys Ala His Gly Gln
225                 230                 235                 240

Leu Tyr Glu Val Leu Arg Ala Gly Arg Lys Ile Thr Pro Arg Leu Leu
                245                 250                 255

Val Asp Trp Ser Thr Gly Ile Ala Ser Gly Met Asn Tyr Leu His Leu
                260                 265                 270

His Lys Ile Ile His Arg Asp Leu Lys Ser Pro Lys
            275                 280

<210>  107
<211>  185
<212>  PRT
<213>  Homo sapiens

<400>  107

Met Cys Gly Gln Arg Trp Ile His Asn Phe Thr Cys Leu Ala Phe Leu
1                   5                   10                  15

Phe His Thr Leu Lys Ser Gly Asn Lys Ser Val His Leu Arg Lys Ala
                20                  25                  30

Ser Ser Pro Asn Leu His Arg Arg Gln Trp Glu Lys Asn Val Pro Asn
            35                  40                  45

Thr Ala Leu Thr Ala Leu Glu Asn Ala Ser Ile Leu Thr Ser Ser Leu
        50                  55                  60

Thr Ala Glu Asp Asp Arg Gly Gly Ser Val Ile Lys Tyr Ser Lys Asn
65                  70                  75                  80

Thr Thr Arg Lys Gln Trp Leu Lys Glu Thr Pro Asp Thr Leu Leu Asn
                85                  90                  95

Ile Leu Lys Asn Ala Asp Leu Ser Leu Ala Phe Gln Thr Tyr Thr Ile
            100                 105                 110

Tyr Arg Pro Gly Ser Glu Gly Phe Leu Lys Gly Pro Leu Ser Glu Glu
            115                 120                 125

Thr Glu Ala Ser Asp Ser Val Asp Gly Gly His Asp Ser Val Ile Leu
        130                 135                 140

Asp Pro Glu Arg Leu Glu Pro Gly Leu Asp Glu Glu Asp Thr Asp Phe
145                 150                 155                 160
```

Glu Glu Glu Asp Asp Asn Pro Asp Trp Val Ser Glu Leu Lys Lys Arg
            165   170   175

Ala Gly Trp Gln Gly Leu Cys Asp Arg
            180   185

<210>   108
<211>   83
<212>   PRT
<213>   Homo sapiens

<400>   108

Met Ala Pro Pro Ser Glu Glu Thr Pro Leu Ile Pro Gln Arg Ser Cys
1   5   10   15

Ser Leu Leu Ser Thr Glu Ala Gly Ala Leu His Val Leu Leu Pro Ala
            20   25   30

Arg Gly Pro Gly Pro Pro Gln Arg Leu Ser Phe Ser Phe Gly Val Pro
            35   40   45

Val Arg Pro Val Gly Ala Asn Gly Pro Pro Leu Thr Ser Gly Phe Leu
        50   55   60

Gly Gly Trp Ala Glu Ala Ser Val Gln Arg Gly Leu Trp Lys Cys Leu
65   70   75   80

Leu Thr Glu

<210>   109
<211>   213
<212>   PRT
<213>   Homo sapiens

<400>   109

Met Ala Glu Ser Ala Gly Ala Ser Ser Phe Phe Pro Leu·Val Val Leu
1   5   10   15

Leu Leu Ala Gly Ser Gly Gly Ser Gly Pro Arg Gly Val Gln Ala Leu
            20   25   30

Leu Cys Ala Cys Thr Ser Cys Leu Gln Ala Asn Tyr Thr Cys Glu Thr
            35   40   45

Asp Gly Ala Cys Met Val Ser Ile Phe Asn Leu Asp Gly Met Glu His
        50   55   60

His Val Arg Thr Cys Ile Pro Lys Val Glu Leu Val Pro Ala Gly Lys
65   70   75   80

Pro Phe Tyr Cys Leu Ser Ser Glu Asp Leu Arg Asn Thr His Cys Cys
            85   90   95

```
Tyr Thr Asp Tyr Cys Asn Arg Ile Asp Leu Arg Val Pro Ser Gly His
        100                 105                 110

Leu Lys Glu Pro Glu His Pro Ser Met Trp Gly Pro Val Glu Leu Val
        115                 120                 125

Gly Ile Ile Ala Gly Pro Val Phe Leu Leu Phe Leu Ile Ile Ile Ile
        130                 135                 140

Val Phe Leu Val Ile Asn Tyr His Gln Arg Val Tyr His Asn Arg Gln
145                 150                 155                 160

Arg Leu Asp Met Glu Asp Pro Ser Cys Glu Met Cys Leu Ser Lys Asp
                165                 170                 175

Lys Thr Leu Gln Asp Leu Val Tyr Asp Leu Ser Thr Ser Gly Ser Gly
        180                 185                 190

Ser Gly Thr Lys Phe Phe Arg Ala Ser Cys Leu Trp Leu Ala Phe Ile
        195                 200                 205

Ser Phe Pro Ala Gly
    210

<210>   110
<211>   383
<212>   PRT
<213>   Homo sapiens

<400>   110

Met Asp Glu Gln Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala
1                   5                   10                  15

Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys
                20                  25                  30

Asn Lys Asp Thr Gly His Ser Asn Arg Gln Ser Asp Val Arg Ile Lys
        35                  40                  45

Phe Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val
        50                  55                  60

Lys Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro
65                  70                  75                  80

Leu Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn
                85                  90                  95

Gln Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Ser
        100                 105                 110

Met Lys Ser Leu Arg Ile Leu Leu Leu Ser Gln Asp Arg Asn His Asn
        115                 120                 125

Ser Ser Ser Pro His Ser Glu Val Ser Arg Gln Val Arg Ile Lys Ala
        130                 135                 140
```

```
Ser Gln Ser Ala Gly Asp Ile Asn Thr Ile Tyr Gln Pro Pro Glu Pro
145             150             155             160

Arg Ser Arg His Leu Ser Val Ser Ser Gln Asn Pro Gly Arg Ser Ser
            165             170             175

Pro Pro Pro Gly Tyr Val Pro Glu Arg Gln Gln His Ile Ala Arg Gln
            180             185             190

Gly Ser Tyr Thr Ser Ile Asn Ser Glu Gly Glu Phe Ile Pro Glu Thr
            195             200             205

Ser Glu Gln Cys Met Leu Asp Pro Leu Ser Ser Ala Glu Asn Ser Leu
    210             215             220

Ser Gly Ser Cys Gln Ser Leu Asp Arg Ser Ala Asp Ser Pro Ser Phe
225             230             235             240

Arg Lys Ser Arg Met Ser Arg Ala Gln Ser Phe Pro Asp Asn Arg Gln
            245             250             255

Glu Tyr Ser Asp Arg Glu Thr Gln Leu Tyr Asp Lys Gly Val Lys Gly
            260             265             270

Gly Thr Tyr Pro Arg Arg Tyr His Val Ser Val His His Lys Asp Tyr
            275             280             285

Ser Asp Gly Arg Arg Thr Phe Pro Arg Ile Arg Arg His Gln Gly Asn
    290             295             300

Leu Phe Thr Leu Val Pro Ser Ser Arg Ser Leu Ser Thr Asn Gly Glu
305             310             315             320

Asn Met Gly Leu Ala Val Gln Tyr Leu Asp Pro Arg Gly Arg Leu Arg
            325             330             335

Ser Ala Asp Ser Glu Asn Ala Leu Ser Val Gln Glu Arg Asn Val Pro
            340             345             350

Thr Lys Cys Glu Glu Leu Ser Leu Ala Arg Arg Arg Leu Pro Arg Trp
            355             360             365

Ser Gln Thr Ser Tyr Gly Gly Lys Gln Leu Gly Pro Trp Asp Pro
    370             375             380

<210>   111
<211>   414
<212>   PRT
<213>   Homo sapiens

<400>   111

Met Asp Glu Gln Glu Ala Leu Asn Ser Ile Met Asn Asp Leu Val Ala
1               5               10              15

Leu Gln Met Asn Arg Arg His Arg Met Pro Gly Tyr Glu Thr Met Lys
```

```
           20                      25                      30
Asn Lys Asp Thr Gly His Ser Asn Arg Gln Lys Lys His Asn Ser Ser
        35                      40                      45

Ser Ser Ala Leu Leu Asn Ser Pro Thr Val Thr Thr Ser Ser Cys Ala
        50          ·           55                      60

Gly Ala Ser Glu Lys Lys Lys Phe Leu Ser Asp Val Arg Ile Lys Phe
65                      70                      75                      80

Glu His Asn Gly Glu Arg Arg Ile Ile Ala Phe Ser Arg Pro Val Lys
                85                      90                      95

Tyr Glu Asp Val Glu His Lys Val Thr Thr Val Phe Gly Gln Pro Leu
                100                     105                     110

Asp Leu His Tyr Met Asn Asn Glu Leu Ser Ile Leu Leu Lys Asn Gln
        115                     120                     125

Asp Asp Leu Asp Lys Ala Ile Asp Ile Leu Asp Arg Ser Ser Ser Met
        130                     135                     140

Lys Ser Leu Arg Ile Leu Leu Leu Ser Gln Asp Arg Asn His Asn Ser
145                     150                     155                     160

Ser Ser Pro His Ser Glu Val Ser Arg Gln Val Arg Ile Lys Ala Ser
                165                     170                     175

Gln Ser Ala Gly Asp Ile Asn Thr Ile Tyr Gln Pro Pro Glu Pro Arg
                180                     185                     190

Ser Arg His Leu Ser Val Ser Ser Gln Asn Pro Gly Arg Ser Ser Pro
                195                     200                     205

Pro Pro Gly Tyr Val Pro Glu Arg Gln Gln His Ile Ala Arg Gln Gly
        210                     215                     220

Ser Tyr Thr Ser Ile Asn Ser Glu Gly Glu Phe Ile Pro Glu Thr Ser
225                     230                     235                     240

Glu Gln Cys Met Leu Asp Pro Leu Ser Ser Ala Glu Asn Ser Leu Ser
                245                     250                     255

Gly Ser Cys Gln Ser Leu Asp Arg Ser Ala Asp Ser Pro Ser Phe Arg
                260                     265                     270

Lys Ser Arg Met Ser Arg Ala Gln Ser Phe Pro Asp Asn Arg Gln Glu
        275                     280                     285

Tyr Ser Asp Arg Glu Thr Gln Leu Tyr Asp Lys Gly Val Lys Gly Gly
        290                     295                     300

Thr Tyr Pro Arg Arg Tyr His Val Ser Val His His Lys Asp Tyr Ser
305                     310                     315                     320

Asp Gly Arg Arg Thr Phe Pro Arg Ile Arg Arg His Gln Gly Asn Leu
```

```
                    325                         330                          335
Phe Thr Leu Val Pro Ser Ser Arg Ser Leu Ser Thr Asn Gly Glu Asn
            340             345                 350

Met Gly Leu Ala Val Gln Tyr Leu Asp Pro Arg Gly Arg Leu Arg Ser
            355             360                 365

Ala Asp Ser Glu Asn Ala Leu Ser Val Gln Glu Arg Asn Val Pro Thr
            370             375                 380

Lys Cys Glu Glu Leu Ser Leu Ala Arg Arg Arg Leu Pro Arg Trp Ser
385               390                 395                     400

Gln Thr Ser Tyr Gly Gly Lys Gln Leu Gly Pro Trp Asp Pro
                405                 410
```

<210> 112
<211> 201
<212> PRT
<213> Homo sapiens

<400> 112

```
Met Ala Lys Gln Tyr Asp Ser Val Glu Cys Pro Phe Cys Asp Glu Val
1               5                   10                  15

Ser Lys Tyr Glu Lys Leu Ala Lys Ile Gly Gln Gly Thr Phe Gly Glu
            20                  25                  30

Val Phe Lys Ala Arg His Arg Lys Thr Gly Gln Lys Val Ala Leu Lys
            35                  40                  45

Lys Val Leu Met Glu Asn Glu Lys Glu Gly Phe Pro Ile Thr Ala Leu
        50                  55                  60

Arg Glu Ile Lys Ile Leu Gln Leu Leu Lys His Glu Asn Val Val Asn
65                  70                  75                      80

Leu Ile Glu Ile Cys Arg Thr Lys Ala Ser Pro Tyr Asn Arg Cys Lys
                85                  90                  95

Gly Ser Ile Tyr Leu Val Phe Asp Phe Cys Glu His Asp Leu Ala Gly
            100                 105                 110

Leu Leu Ser Asn Val Leu Val Lys Phe Thr Leu Ser Glu Ile Lys Arg
            115                 120                 125

Val Met Gln Met Leu Leu Asn Gly Leu Tyr Tyr Asn His Asp Phe Phe
        130                 135                 140

Trp Ser Asp Pro Met Pro Ser Asp Leu Lys Gly Met Leu Ser Thr His
145                 150                 155                     160

Leu Thr Ser Met Phe Glu Tyr Leu Ala Pro Pro Arg Arg Lys Gly Ser
                165                 170                 175
```

Gln Ile Thr Gln Gln Ser Thr Asn Gln Ser Arg Asn Pro Ala Thr Thr
            180   185   190

Asn Gln Thr Glu Phe Glu Arg Val Phe
            195   200

<210> 113
<211> 125
<212> PRT
<213> Homo sapiens

<400> 113

Met Ala Thr Ser Arg Tyr Glu Pro Val Ala Glu Ile Gly Val Gly Ala
1   5   10   15

Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Cys
            20   25   30

Ala Leu Lys Ser Val Arg Val Pro Asn Gly Gly Gly Gly Gly Gly Gly
            35   40   45

Leu Pro Ile Ser Thr Val Arg Glu Val Ala Leu Leu Arg Arg Leu Glu
            50   55   60

Ala Phe Glu His Pro Asn Val Val Arg Leu Met Asp Val Cys Ala Thr
65   70   75   80

Ser Arg Thr Asp Arg Glu Ile Lys Val Thr Leu Val Phe Glu His Val
            85   90   95

Asp Gln Asp Leu Arg Thr Tyr Leu Asp Lys Ala Pro Pro Pro Gly Leu
            100   105   110

Pro Ala Glu Thr Ile Lys Val Ser Gly Val Gly Arg His
            115   120   125

<210> 114
<211> 45
<212> PRT
<213> Homo sapiens

<400> 114

Met Ala Thr Ser Arg Tyr Glu Pro Val Ala Glu Ile Gly Val Gly Ala
1   5   10   15

Tyr Gly Thr Val Tyr Lys Ala Arg Asp Pro His Ser Gly His Phe Cys
            20   25   30

Ala Leu Lys Ser Val Arg Val Pro Thr His Leu Ser Phe
            35   40   45

<210> 115
<211> 160
<212> PRT
<213> Homo sapiens

<400> 115

Met Gly Val Cys Pro Gly Lys Thr Pro Phe Cys Ser Pro Lys Pro Gln
1   5   10   15

Gly Leu Ala Arg Gly His Trp Ser Arg Arg Asp Ile Cys Val Thr
            20   25   30

Gly Pro Leu Pro Leu Glu Pro Arg Ala Val Tyr Cys Lys Asp Val Leu
        35   40   45

Asp Ile Glu Gln Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr
        50   55   60

Asp Asp Asp Phe Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro
65   70   75   80

Trp Gln Asn Glu Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val
                85   90   95

Phe Gly Pro Asn Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro
            100   105   110

Pro Glu Pro Pro Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln
        115   120   125

His Gln Asn Asn Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn
        130   135   140

His His Ile Asn Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser
145   150   155   160

<210>   116
<211>   300
<212>   PRT
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(300)
<223>   "XAA" can be any amino acid

<400>   116

Met Pro Arg Ala Arg Met Pro Xaa Pro Arg Ala His Ser Lys Ala Gly
1   5   10   15

Cys Pro Cys Gly Cys Pro Arg Asp Pro Leu Thr Leu Leu Ser Pro Ser
            20   25   30

Gly His Ile Arg Ile Ser Asp Leu Gly Leu Ala Val Lys Ile Pro Glu
        35   40   45

Gly Asp Leu Ile Arg Gly Arg Val Gly Thr Val Gly Tyr Met Ala Pro
        50   55   60

Glu Val Leu Asn Asn Gln Arg Tyr Gly Leu Ser Pro Asp Tyr Trp Gly
65   70   75   80

Leu Gly Cys Leu Ile Tyr Glu Met Ile Glu Gly Gln Ser Pro Phe Arg
                85   90   95

Gly Arg Lys Glu Lys Val Lys Arg Glu Glu Val Asp Arg Arg Val Leu
            100   105   110

Glu Thr Glu Glu Val Tyr Ser His Lys Phe Ser Glu Glu Ala Lys Ser
        115   120   125

Ile Cys Lys Met Leu Leu Thr Lys Asp Ala Lys Gln Arg Leu Gly Cys
    130   135   140

Gln Glu Glu Gly Ala Ala Glu Val Lys Arg His Pro Phe Phe Arg Asn
145   150   155   160

Met Asn Phe Lys Arg Leu Glu Ala Gly Met Leu Asp Pro Pro Phe Val
            165   170   175

Pro Asp Pro Arg Ala Val Tyr Cys Lys Asp Val Leu Asp Ile Glu Gln
            180   185   190

Phe Ser Thr Val Lys Gly Val Asn Leu Asp His Thr Asp Asp Asp Phe
        195   200   205

Tyr Ser Lys Phe Ser Thr Gly Ser Val Ser Ile Pro Trp Gln Asn Glu
    210   215   220

Met Ile Glu Thr Glu Cys Phe Lys Glu Leu Asn Val Phe Gly Pro Asn
225   230   235   240

Gly Thr Leu Pro Pro Asp Leu Asn Arg Asn His Pro Pro Glu Pro Pro
            245   250   255

Lys Lys Gly Leu Leu Gln Arg Leu Phe Lys Arg Gln His Gln Asn Asn
            260   265   270

Ser Lys Ser Ser Pro Ser Ser Lys Thr Ser Phe Asn His His Ile Asn
    275   280   285

Ser Asn His Val Ser Ser Asn Ser Thr Gly Ser Ser
    290   295   300

<210> 117
<211> 169
<212> PRT
<213> Homo sapiens

<220>
<221> -
<222> (1)..(169)
<223> "XAA" can be any amino acid

<400> 117

```
Met Arg Met Pro Arg Ala Arg Met Pro Xaa Pro Arg Ala His Ser Lys
1               5                   10                  15

Ala Gly Cys Pro Cys Gly Cys Pro Arg Asp Pro Leu Thr Leu Leu Ser
            20                  25                  30

Pro Ser Gly His Ile Arg Ile Ser Asp Leu Gly Leu Ala Val Lys Ile
        35                  40                  45

Pro Glu Gly Asp Leu Ile Arg Gly Arg Val Gly Thr Val Gly Tyr Met
    50                  55                  60

Ala Pro Glu Val Leu Asn Asn Gln Arg Tyr Gly Leu Ser Pro Asp Tyr
65                  70                  75                  80

Trp Gly Leu Gly Cys Leu Ile Tyr Glu Met Ile Glu Gly Gln Ser Pro
            85                  90                  95

Phe Arg Gly Arg Lys Glu Lys Val Lys Arg Glu Glu Val Asp Arg Arg
            100                 105                 110

Val Leu Glu Thr Glu Glu Val Tyr Ser His Lys Phe Ser Glu Glu Ala
        115                 120                 125

Lys Ser Ile Cys Lys Met Val Ser Ser Trp Trp Pro Asp Ala Thr Leu
    130                 135                 140

Lys Leu Val Ala Pro Ser Leu Gly Leu Ala Pro Val Cys Pro Gln Asn
145                 150                 155                 160

Ser Lys Gln Ala Glu Gly Thr Gly Val
                165
```

<210> 118
<211> 319
<212> PRT
<213> Homo sapiens

<400> 118

```
Met Ala Pro Phe Leu Arg Ile Ala Phe Asn Ser Tyr Glu Leu Gly Ser
1               5                   10                  15

Leu Gln Ala Glu Asp Glu Ala Asn Gln Pro Phe Cys Ala Val Lys Met
            20                  25                  30

Lys Glu Ala Leu Ser Thr Glu Arg Gly Lys Thr Leu Val Gln Lys Lys
        35                  40                  45

Pro Thr Met Tyr Pro Glu Trp Lys Ser Thr Phe Asp Ala His Ile Tyr
    50                  55                  60

Glu Gly Arg Val Ile Gln Ile Val Leu Met Arg Ala Ala Glu Glu Pro
65                  70                  75                  80
```

```
Val Ser Glu Val Thr Val Gly Val Ser Val Leu Ala Glu Arg Cys Lys
                85              90                  95

Lys Asn Asn Gly Lys Ala Glu Phe Trp Leu Asp Leu Gln Pro Gln Ala
                100             105             110

Lys Val Leu Met Ser Val Gln Tyr Phe Leu Glu Asp Val Asp Cys Lys
            115             120             125

Gln Ser Met Arg Ser Glu Asp Glu Ala Lys Phe Pro Thr Met Asn Arg
    130             135             140

Arg Gly Ala Ile Lys Gln Ala Lys Ile His Tyr Ile Lys Asn His Glu
145             150             155             160

Phe Ile Ala Thr Phe Phe Gly Gln Pro Thr Phe Cys Ser Val Cys Lys
            165             170             175

Asp Phe Val Trp Gly Leu Asn Lys Gln Gly Tyr Lys Cys Arg Gln Cys
            180             185             190

Asn Ala Ala Ile His Lys Lys Cys Ile Asp Lys Ile Ile Gly Arg Cys
            195             200             205

Thr Gly Thr Ala Ala Asn Ser Arg Asp Thr Ile Phe Gln Lys Glu Arg
    210             215             220

Phe Asn Ile Asp Met Pro His Arg Phe Lys Val His Asn Tyr Met Ser
225             230             235             240

Pro Thr Phe Cys Asp His Cys Gly Ser Leu Leu Leu Pro Ala Pro His
            245             250             255

Asp Lys His Gln Trp Asp Cys Gly Asp Phe Cys Cys Trp Pro Arg Pro
            260             265             270

Cys Pro Gln Ser Val Leu Gly Cys Arg Leu Ala Gly Leu Ser Trp Tyr
    275             280             285

Phe Leu Cys Glu Leu Cys Val Asn Leu Leu Phe Leu Cys Leu Arg Arg
    290             295             300

Glu Ile Val Asn Pro Val Phe His Tyr Leu Asn Val Val Ile Tyr
305             310             315

<210>   119
<211>   236
<212>   PRT
<213>   Homo sapiens

<400>   119

Met Asp Glu Thr His Pro Gly Tyr Gly Lys Glu Val Asp Leu Glu Phe
1               5               10              15

Leu Val Ser Pro Ser Leu Pro Cys Leu Leu Ser Phe Ala Gly Ser Ala
            20              25              30
```

tcgccgttgt tctgtctcgt gccgccgccc tgggctgcat tgggttggtg gcccacgccg   1080

gccaactcac cgcagtctgg cgccgcccag gagccgcccg cgctccctga accctagaac   1140

tgtcttcgac tccggggccc cgttggaaga ctgagtgccc ggggcacggc acagaagccg   1200

cgcccaccgc ctgccagttc acaaccgctc cgagcgtggg tctccgccca gctccagtcc   1260

tgtgatccgg gcccgccccc tagcggccgg ggagggaggg gccgggtccg cggccggcga   1320

acggggctcg aagggtcctt gtagccggga atgctgctgc tgctgctgct gctgctgctg   1380

ctgctggggg gatcacagac catttctttc tttcggccag gctgaggccc tgacgtggat   1440

gggcaaactg caggcctggg aaggcagcaa gccgggccgt ccgtgttcca tcctccacgc   1500

accccaccct atcgttggtt cgcaaagtgc aaagctttct tgtgcatgac gccctgctct   1560

ggggagcgtc tggcgcgatc tctgcctgct tactcgggaa atttgctttt gccaaacccg   1620

cttttтcggg gatcccgcgc ccccctcctc acttgcgctg ctctcggagc cccagccggc   1680

tccgcccgct tcggcggttt ggatatttat tgacctcgtc ctccgactcg ctgacaggct   1740

acaggacccc caacaacccc aatccacgtt ttggatgcac tgagaccccg acattcctcg   1800

gtatttattg tctgtcccca cctaggaccc ccacccccga ccctcgcgaa taaaaggccc   1860

tccatctgcc caaagctytg gactccacag tgtccgcggt ttgcgttgtg ggccggaggc   1920

tccgcagcgg gccaatccgg aggcgtgtgg aggcggccga aggtctggga ggagctagcg   1980

ggatgcgaag cggccgaatc agggttgggg gaggaaaagc cacggggcgg ggctttggcg   2040

tccggccaat aggagggcga gcgggccacc cggaggcacc gcccccgccc agctgtggcc   2100

cagctgtgcc accgagcgtc gagaagaggg ggctgggctg gcagcgcgcg cggccatcct   2160

ccttccactg cgcctgcgca cgccacgcgc atccg   2195

<210>   61
<211>   1662
<212>   DNA
<213>   Homo sapiens

<400>   61
ckwkkttact tcagacatgg gacggtctct gtagttacag tggggcatta agtaagggtg   60

tgtgtgttgc tggggatctg agaagtcgat ctttgagctg agcgctggtg aaggagaaac   120

aagccatgga aggaaaggtg ccaagtggtc aggcgagagc ctccagggca aaggccttgg   180

gcaggtggga atcctgattt gttcctcagt caactacgcg aggcagaggc tcggaaccgg   240

gacctagagg cacacgtccg gcagttgcag gagcggatgg agttgctgca ggcagaggga   300

Arg His Leu Val Pro Pro Asp Ser Asn Leu Phe Ser Lys Leu Trp Ala
        35   40   45

Cys Gly Val Ile Leu Phe Thr Leu Leu Ala Gly Ser Pro Pro Phe Trp
        50   55   60

His Arg Arg Gln Ile Leu Met Leu Arg Met Ile Met Glu Gly Gln Tyr
65   70   75   80

Gln Phe Ser Ser Pro Glu Trp Asp Asp Arg Ser Ser Thr Val Lys Asp
                85   90   95

Leu Ile Ser Arg Leu Leu Gln Val Asp Pro Glu Ala Arg Leu Thr Ala
            100   105   110

Glu Gln Ala Leu Gln His Pro Phe Phe Glu Arg Cys Glu Gly Ser Gln
        115   120   125

Pro Trp Asn Leu Thr Pro Arg Gln Arg Phe Arg Val Ala Val Trp Thr
        130   135   140

Val Leu Ala Ala Gly Arg Val Ala Leu Ser Thr His Arg Val Arg Pro
145   150   155   160

Leu Thr Lys Asn Ala Leu Leu Arg Asp Pro Tyr Ala Leu Arg Ser Val
            165   170   175

Arg His Leu Ile Asp Asn Cys Ala Phe Arg Leu Tyr Gly His Trp Val
            180   185   190

Lys Lys Gly Glu Gln Gln Asn Arg Ala Ala Leu Phe Gln His Arg Pro
        195   200   205

Pro Gly Pro Phe Pro Ile Met Gly Pro Glu Glu Glu Gly Asp Ser Ala
        210   215   220

Ala Ile Thr Glu Asp Glu Ala Val Leu Val Leu Gly
225   230   235

<210>   120
<211>   572
<212>   PRT
<213>   Homo sapiens

<400>   120

Met Ala Phe Cys Ala Lys Met Arg Ser Ser Lys Lys Thr Glu Val Asn
1   5   10   15

Leu Glu Ala Pro Glu Pro Gly Val Glu Val Ile Phe Tyr Leu Ser Asp
            20   25   30

Arg Glu Pro Leu Arg Leu Gly Ser Gly Glu Tyr Thr Ala Glu Glu Leu
        35   40   45

Cys Ile Arg Ala Ala Gln Ala Cys Arg Ile Ser Pro Leu Cys His Asn

```
            50                    55                    60

Leu Phe Ala Leu Tyr Asp Glu Asn Thr Lys Leu Trp Tyr Ala Pro Asn
65                  70                  75                  80

Arg Thr Ile Thr Val Asp Asp Lys Met Ser Leu Arg Leu His Tyr Arg
                85                  90                  95

Met Arg Phe Tyr Phe Thr Asn Trp His Gly Thr Asn Asp Asn Glu Gln
            100                 105                 110

Ser Val Trp Arg His Ser Pro Lys Lys Gln Lys Asn Gly Tyr Glu Lys
            115                 120                 125

Lys Lys Ile Pro Asp Ala Thr Pro Leu Leu Asp Ala Ser Ser Leu Glu
        130                 135                 140

Tyr Leu Phe Ala Gln Gly Gln Tyr Asp Leu Val Lys Cys Leu Ala Pro
145                 150                 155                 160

Ile Arg Asp Pro Lys Thr Glu Gln Asp Gly His Asp Ile Glu Asn Glu
                165                 170                 175

Cys Leu Gly Met Ala Val Leu Ala Ile Ser His Tyr Ala Met Met Lys
            180                 185                 190

Lys Met Gln Leu Pro Glu Leu Pro Lys Asp Ile Ser Tyr Lys Arg Tyr
        195                 200                 205

Ile Pro Glu Thr Leu Asn Lys Ser Ile Arg Gln Arg Asn Leu Leu Thr
    210                 215                 220

Arg Met Arg Ile Asn Asn Val Phe Lys Asp Phe Leu Lys Glu Phe Asn
225                 230                 235                 240

Asn Lys Thr Ile Cys Asp Ser Ser Val Ser Thr His Asp Leu Lys Val
            245                 250                 255

Lys Tyr Leu Ala Thr Leu Glu Thr Leu Thr Lys His Tyr Gly Ala Glu
            260                 265                 270

Ile Phe Glu Thr Ser Met Leu Leu Ile Ser Ser Glu Asn Glu Met Asn
        275                 280                 285

Trp Phe His Ser Asn Asp Gly Gly Asn Val Leu Tyr Tyr Glu Val Met
    290                 295                 300

Val Thr Gly Asn Leu Gly Ile Gln Trp Arg His Lys Pro Asn Val Val
305                 310                 315                 320

Ser Val Glu Lys Glu Lys Asn Lys Leu Lys Arg Lys Lys Leu Glu Asn
            325                 330                 335

Lys Asp Lys Lys Asp Glu Glu Lys Asn Lys Ile Arg Glu Glu Trp Asn
            340                 345                 350

Asn Phe Ser Phe Phe Pro Glu Ile Thr His Ile Val Ile Lys Glu Ser
```

Val Val Ser Ile Asn Lys Gln Asp Asn Lys Lys Met Glu Leu Lys Leu
        370   375   380

Ser Ser His Glu Glu Ala Leu Ser Phe Val Ser Leu Val Asp Gly Tyr
385   390   395   400

Phe Arg Leu Thr Ala Asp Ala His His Tyr Leu Cys Thr Asp Val Ala
                405   410   415

Pro Pro Leu Ile Val His Asn Ile Gln Asn Gly Cys His Gly Pro Ile
                420   425   430

Cys Thr Glu Tyr Ala Ile Asn Lys Leu Arg Gln Glu Gly Ser Glu Glu
                435   440   445

Gly Met Tyr Val Leu Arg Trp Ser Cys Thr Asp Phe Asp Asn Ile Leu
        450   455   460

Met Thr Val Thr Cys Phe Glu Lys Ser Glu Gln Val Gln Gly Ala Gln
465   470   475   480

Lys Gln Phe Lys Asn Phe Gln Ile Glu Val Gln Lys Gly Arg Tyr Ser
                485   490   495

Leu His Gly Ser Asp Arg Ser Phe Pro Ser Leu Gly Asp Leu Met Ser
                500   505   510

His Leu Lys Lys Gln Ile Leu Arg Thr Asp Asn Ile Ser Phe Met Leu
                515   520   525

Lys Arg Cys Cys Gln Pro Lys Pro Arg Gly Ser Leu Pro Val Pro Glu
        530   535   540

Pro Gly Cys Ile Pro Ser Val Ile Ala Glu Thr Gln Ile Asp Gln Asn
545   550   555   560

Thr Leu Thr Asp Leu Asn Lys Val Asp Pro Pro Pro
                565   570

<210>   121
<211>   311
<212>   PRT
<213>   Homo sapiens

<400>   121

Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Glu
1   5   10   15

Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr
                20   25   30

Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro
                35   40   45

```
Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe
    50                  55                  60

Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly
 65                  70                  75                  80

Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg
                 85                  90                  95

Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu
            100                 105                 110

Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly
            115                 120                 125

Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile
    130                 135                 140

Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu
145                 150                 155                 160

Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg
                165                 170                 175

Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp
            180                 185                 190

Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu
            195                 200                 205

Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu
    210                 215                 220

Gln Gln Leu Val Gln His Tyr Ser Glu Arg Ala Ala Gly Leu Cys Cys
225                 230                 235                 240

Arg Leu Val Val Pro Cys His Lys Gly Met Pro Arg Leu Thr Asp Leu
                245                 250                 255

Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln
            260                 265                 270

Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly
            275                 280                 285

Met Leu Arg Leu Asn Tyr Ser Leu Ile Ser Phe Pro Val Trp Lys Ile
    290                 295                 300

Pro Asn Thr Lys Asp Gly Arg
305                 310

<210>  122
<211>  387
<212>  PRT
<213>  Homo sapiens

<400>  122
```

```
Met Gly Cys Val Gln Cys Lys Asp Lys Glu Ala Thr Lys Leu Thr Glu
1               5                   10                  15

Glu Arg Asp Gly Ser Leu Asn Gln Ser Ser Gly Tyr Arg Tyr Gly Thr
                20                  25                  30

Asp Pro Thr Pro Gln His Tyr Pro Ser Phe Gly Val Thr Ser Ile Pro
            35                  40                  45

Asn Tyr Asn Asn Phe His Ala Ala Gly Gly Gln Gly Leu Thr Val Phe
        50                  55                  60

Gly Gly Val Asn Ser Ser Ser His Thr Gly Thr Leu Arg Thr Arg Gly
65                  70                  75                  80

Gly Thr Gly Val Thr Leu Phe Val Ala Leu Tyr Asp Tyr Glu Ala Arg
                85                  90                  95

Thr Glu Asp Asp Leu Ser Phe His Lys Gly Glu Lys Phe Gln Ile Leu
            100                 105                 110

Asn Ser Ser Glu Gly Asp Trp Trp Glu Ala Arg Ser Leu Thr Thr Gly
        115                 120                 125

Glu Thr Gly Tyr Ile Pro Ser Asn Tyr Val Ala Pro Val Asp Ser Ile
    130                 135                 140

Gln Ala Glu Glu Trp Tyr Phe Gly Lys Leu Gly Arg Lys Asp Ala Glu
145                 150                 155                 160

Arg Gln Leu Leu Ser Phe Gly Asn Pro Arg Gly Thr Phe Leu Ile Arg
                165                 170                 175

Glu Ser Glu Thr Thr Lys Gly Ala Tyr Ser Leu Ser Ile Arg Asp Trp
            180                 185                 190

Asp Asp Met Lys Gly Asp His Val Lys His Tyr Lys Ile Arg Lys Leu
        195                 200                 205

Asp Asn Gly Gly Tyr Tyr Ile Thr Thr Arg Ala Gln Phe Glu Thr Leu
    210                 215                 220

Gln Gln Leu Val Gln His Tyr Ser Glu Arg Ala Ala Gly Leu Cys Cys
225                 230                 235                 240

Arg Leu Val Val Pro Cys His Lys Gly Met Pro Arg Leu Thr Asp Leu
            245                 250                 255

Ser Val Lys Thr Lys Asp Val Trp Glu Ile Pro Arg Glu Ser Leu Gln
            260                 265                 270

Leu Ile Lys Arg Leu Gly Asn Gly Gln Phe Gly Glu Val Trp Met Gly
        275                 280                 285

Thr Trp Asn Gly Asn Thr Lys Val Ala Ile Lys Thr Leu Lys Pro Gly
    290                 295                 300
```

Thr Met Ser Pro Glu Ser Phe Leu Glu Glu Ala Gln Ile Met Lys Lys
305   310   315   320

Leu Lys His Asp Lys Leu Val Gln Leu Tyr Ala Val Val Ser Glu Glu
                325   330   335

Pro Ile Tyr Ile Val Thr Glu Tyr Met Asn Lys Gly Trp Ala Thr Pro
            340   345   350

Leu Leu Ser Pro Ala His Ser Ala Leu Arg Gly Cys Leu Gly Glu Arg
        355   360   365

Asn Gly Ser Phe Leu Leu Ala Thr Phe Leu Val Ser Ala Trp Val Lys
        370   375   380

Tyr Ser His
385

<210>   123
<211>   516
<212>   PRT
<213>   Homo sapiens

<400>   123

Met Arg Leu Glu Leu Pro Ala Gly His Trp Glu Arg Pro Asp Leu Glu
1   5   10   15

Leu Leu Glu Lys Ser Thr Gln Gln Gly Arg Ala Trp Asp Leu Glu Leu
            20   25   30

Leu Glu Lys Gly Ala Gly Ser Leu Pro Leu Tyr Val Trp Lys Val Ser
            35   40   45

Leu Ser Leu Leu Glu Leu His Lys Arg Arg Lys Ala Leu Thr Glu Pro
        50   55   60

Glu Ala Arg Tyr Tyr Leu Arg Gln Ile Val Leu Gly Cys Gln Tyr Leu
65   70   75   80

His Arg Asn Arg Val Ile His Arg Asp Leu Lys Leu Gly Asn Leu Phe
                85   90   95

Leu Asn Glu Asp Leu Glu Val Lys Ile Gly Asp Phe Gly Leu Ala Thr
                100   105   110

Lys Val Glu Tyr Asp Gly Glu Arg Lys Lys Thr Leu Cys Gly Thr Pro
            115   120   125

Asn Tyr Ile Ala Pro Glu Val Leu Ser Lys Lys Gly His Ser Phe Glu
            130   135   140

Val Asp Val Trp Ser Ile Gly Cys Ile Met Tyr Thr Leu Leu Val Gly
145   150   155   160

Lys Pro Pro Phe Glu Thr Ser Cys Leu Lys Glu Thr Tyr Leu Arg Ile

Lys Lys Asn Glu Tyr Ser Ile Pro Lys His Ile Asn Pro Val Ala Ala
            180   185   190

Ser Leu Ile Gln Lys Met Leu Gln Thr Asp Pro Thr Ala Arg Pro Thr
            195   200   205

Ile Asn Glu Leu Leu Asn Asp Glu Phe Phe Thr Ser Gly Tyr Ile Pro
    210   215   220

Ala Arg Leu Pro Ile Thr Cys Leu Thr Ile Pro Pro Arg Phe Ser Ile
225   230   235   240

Ala Pro Ser Ser Leu Asp Pro Ser Asn Arg Lys Pro Leu Thr Val Leu
            245   250   255

Asn Lys Gly Leu Glu Asn Pro Leu Pro Glu Arg Pro Arg Glu Lys Glu
            260   265   270

Glu Pro Val Val Arg Glu Thr Gly Glu Val Val Asp Cys His Leu Ser
            275   280   285

Asp Met Leu Gln Gln Leu His Ser Val Asn Ala Ser Lys Pro Ser Glu
    290   295   300

Arg Gly Leu Val Arg Gln Glu Glu Ala Glu Asp Pro Ala Cys Ile Pro
305   310   315   320

Ile Phe Trp Val Ser Lys Trp Val Asp Tyr Ser Asp Lys Tyr Gly Leu
            325   330   335

Gly Tyr Gln Leu Cys Asp Asn Ser Val Gly Val Leu Phe Asn Asp Ser
            340   345   350

Thr Arg Leu Ile Leu Tyr Asn Asp Gly Asp Ser Leu Gln Tyr Ile Glu
            355   360   365

Arg Asp Gly Thr Glu Ser Tyr Leu Thr Val Ser Ser His Pro Asn Ser
    370   375   380

Leu Met Lys Lys Ile Thr Leu Leu Lys Tyr Phe Arg Asn Tyr Met Ser
385   390   395   400

Glu His Leu Leu Lys Ala Gly Ala Asn Ile Thr Pro Arg Glu Gly Asp
            405   410   415

Glu Leu Ala Arg Leu Pro Tyr Leu Arg Thr Trp Phe Arg Thr Arg Ser
            420   425   430

Ala Ile Ile Leu His Leu Ser Asn Gly Ser Val Gln Ile Asn Phe Phe
    435   440   445

Gln Asp His Thr Lys Leu Ile Leu Cys Pro Leu Met Ala Ala Val Thr
    450   455   460

Tyr Ile Asp Glu Lys Arg Asp Phe Arg Thr Tyr Arg Leu Ser Leu Leu

```
     465                     470                      475                     480

Glu Glu Tyr Gly Cys Cys Lys Glu Leu Ala Ser Arg Leu Arg Tyr Ala
                    485                 490                 495

Arg Thr Met Val Asp Lys Leu Leu Ser Ser Arg Ser Ala Ser Asn Arg
            500             505                 510

Leu Lys Ala Ser
        515

<210>   124
<211>   171
<212>   PRT
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(171)
<223>   "XAA" can be any amino acid


<400>   124

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser
1               5                   10                  15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu
            20                  25                  30

Arg Xaa Pro His Ser Gly Leu Leu Tyr Pro Leu Gln His Pro Pro Ala
        35                  40                  45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp
    50                  55                  60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His
65                  70                  75                  80

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys
                85                  90                  95

Phe Gly Ala Ser Ser Ser Gln Ala Gln Pro Arg Asp Ser Pro Met Thr
            100                 105                 110

Ala Lys Gly Pro Phe Cys Pro Arg Pro Cys Pro Cys Ala Gly Pro Thr
            115                 120                 125

Tyr Ser Pro Thr Tyr Trp Cys Pro Ala Pro Leu Gly Thr Gln Ser Pro
    130                 135                 140

Pro Asp Arg Pro Val Glu Glu Val Glu Glu Leu Ser Pro Gln Asn Tyr
145                 150                 155                 160

Trp Pro Val Val Trp Thr Pro Gly Pro His Phe
                165                 170
```

<210> 125
<211> 134
<212> PRT
<213> Homo sapiens

<400> 125

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser
1   5   10   15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu
            20   25   30

Arg Gly Leu Thr Val Ala Phe Ser Ile Leu Cys Asn Thr Leu Gln Pro
        35   40   45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp
    50   55   60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His
65   70   75   80

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys
            85   90   95

Phe Gly Ala Ser Ser Ser Gln Ala Gln Pro Arg Asp Ser Pro Met Thr
            100   105   110

Ala Lys Gly Pro Phe Cys Pro Arg Pro Cys Pro Cys Ala Gly Pro Thr
        115   120   125

Tyr Ser Pro Thr Tyr Trp
    130

<210> 126
<211> 233
<212> PRT
<213> Homo sapiens

<400> 126

Met Ala Leu Leu Pro Pro Phe Leu Ala Ser His Arg Leu Glu Val Ser
1   5   10   15

Arg Asp Ser Gly Trp Leu Gly Gln Cys Trp Leu Gln Gly Val Trp Glu
            20   25   30

Arg Gly Leu Thr Val Ala Phe Ser Ile Leu Cys Asn Thr Leu Gln Pro
        35   40   45

Glu Phe Ser Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp Asp
    50   55   60

Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe His
65   70   75   80

Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu Lys

Phe Gly Gly Pro Leu Ser Cys Gln Pro Pro Ala Leu Pro Cys Gly Arg
            100   105   110

Pro Gln Asp Glu Leu Gly Cys Ser Pro Glu Ser Arg Gly Cys Gly Pro
            115   120   125

Gly Ala Ala Arg Thr Arg Thr Arg Gly Glu Asp Gly Ala Ala Thr Gly
            130   135   140

Val Arg Asp Pro Ser Pro Ala Pro Trp Pro Thr His Gly Gly His Cys
145   150   155   160

Gln Pro Ala Pro Gln Cys Arg Arg Ala Arg Gly Phe His Ala Ser Leu
            165   170   175

Pro His Pro Ala Gly Trp Gln Tyr Phe Ser Gln Ser Asp Leu Ala Gly
            180   185   190

Arg Pro Gly Glu Glu Gly Glu Tyr Glu Ala Ala Gln Gly Cys Ala Arg
            195   200   205

Gln Arg Leu Leu Leu Arg Pro His Trp Ala Ala Arg Gly Leu Pro Asp
            210   215   220

Pro Ser Leu Thr Asp Lys Cys Ala Ile
225   230

<210>   127
<211>   243
<212>   PRT
<213>   Homo sapiens

<400>   127

Met Ala Ala Glu Leu Asn Lys Asn Lys Lys Ala Arg Ala Ala Glu Ala
1   5   10   15

Ala Arg Ala Ala Glu Ala Ala Lys Ala Ala Glu Ala Thr Lys Ala Ala
            20   25   30

Glu Ala Ala Ala Lys Ala Ala Lys Ala Ser Asn Thr Ser Thr Pro Thr
            35   40   45

Lys Gly Asn Thr Glu Thr Ser Ala Ser Ala Ser Gln Thr Asn His Val
        50   55   60

Lys Asp Val Lys Lys Ile Lys Ile Glu His Ala Pro Ser Pro Ser Ser
65   70   75   80

Gly Gly Thr Leu Lys Asn Asp Lys Ala Lys Thr Lys Pro Pro Leu Gln
                85   90   95

Val Thr Lys Val Glu Asn Asn Leu Ile Val Asp Lys Ala Thr Lys Lys
            100   105   110

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Ala Val Ile Val Gly Lys Glu Ser Lys Ser Ala Ala Thr Lys Glu Glu
    115                 120             125

Ser Val Ser Leu Lys Glu Lys Thr Lys Pro Leu Thr Pro Ser Ile Gly
    130                 135             140

Ala Lys Glu Lys Glu Gln His Val Ala Leu Val Thr Ser Thr Leu Pro
145                 150             155                 160

Pro Leu Pro Leu Pro Pro Met Leu Pro Glu Asp Lys Glu Ala Asp Ser
                165             170             175

Leu Arg Gly Asn Ile Ser Val Lys Ala Val Lys Lys Glu Val Glu Lys
            180             185             190

Lys Leu Arg Cys Leu Leu Ala Asp Leu Pro Leu Pro Pro Glu Leu Pro
        195             200             205

Gly Gly Asp Asp Leu Ser Lys Ser Pro Glu Glu Lys Lys Thr Ala Thr
    210             215             220

Gln Leu His Ser Lys Arg Arg Pro Lys Tyr Val Leu Ala Phe Tyr Leu
225             230             235             240

Leu Leu Asn


<210>  128
<211>  330
<212>  PRT
<213>  Homo sapiens

<400>  128

Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Leu Asp
1               5               10              15

Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp
            20              25              30

Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg
        35              40              45

Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln
    50              55              60

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys
65              70              75              80

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Val Lys Met Lys
            85              90              95

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met
            100             105             110

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu
    115             120             125
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Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln
    130                 135             140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp
145                 150                 155                 160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met
                165                 170                 175

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His
            180                 185                 190

Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu
        195                 200                 205

Asp Val Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys
    210                 215                 220

Met Asn Asp Asp Gly Thr Val Gln Ser Ser Val Ala Val Gly Thr Pro
225                 230                 235                 240

Asp Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Met Gly
            245                 250                 255

Lys Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met Tyr
            260                 265                 270

Glu Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val Glu
        275                 280                 285

Thr Tyr Gly Lys Ile Met Asn His Glu Glu Arg Phe Gln Phe Pro Ser
    290                 295                 300

His Val Thr Asp Val Ser Glu Glu Ala Lys Asp Leu Ile Gln Arg Leu
305                 310                 315                 320

Ser Cys Ile Gln Arg Thr Pro Tyr Leu Gln
            325                 330

<210>    129
<211>    246
<212>    PRT
<213>    Homo sapiens

<400>    129

Met Ser Ala Lys Val Arg Leu Lys Lys Leu Glu Gln Leu Leu Leu Asp
1               5               10              15

Gly Pro Trp Arg Asn Glu Ser Ala Leu Ser Val Glu Thr Leu Leu Asp
            20              25              30

Val Leu Val Cys Leu Tyr Thr Glu Cys Ser His Ser Ala Leu Arg Arg
        35              40              45

Asp Lys Tyr Val Ala Glu Phe Leu Glu Trp Ala Lys Pro Phe Thr Gln
```

Leu Val Lys Glu Met Gln Leu His Arg Glu Asp Phe Glu Ile Ile Lys
65   70   75   80

Val Ile Gly Arg Gly Ala Phe Gly Glu Val Ala Val Val Lys Met Lys
                 85   90   95

Asn Thr Glu Arg Ile Tyr Ala Met Lys Ile Leu Asn Lys Trp Glu Met
                 100   105   110

Leu Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu
                 115   120   125

Val Asn Gly Asp Cys Gln Trp Ile Thr Ala Leu His Tyr Ala Phe Gln
                 130   135   140

Asp Glu Asn His Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp
145   150   155   160

Leu Leu Thr Leu Leu Ser Lys Phe Glu Asp Lys Leu Pro Glu Asp Met
                 165   170   175

Ala Arg Phe Tyr Ile Gly Glu Met Val Leu Ala Ile Asp Ser Ile His
                 180   185   190

Gln Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Val Leu Leu
                 195   200   205

Asp Val Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys
                 210   215   220

Met Asn Asp Asp Gly Thr Val Gly Ile Phe Val Gly Asp Phe Pro Phe
225   230   235   240

Gly Phe Gly Phe Gly Ile
                 245

<210>   130
<211>   378
<212>   PRT
<213>   Homo sapiens

<400>   130

Met Glu Leu Arg Val Gly Asn Arg Tyr Arg Leu Gly Arg Lys Ile Gly
1   5   10   15

Ser Gly Ser Phe Gly Asp Ile Tyr Leu Val Gly Ile Pro Thr Ile Arg
                 20   25   30

Trp Cys Gly Ala Glu Gly Asp Tyr Asn Val Met Val Met Glu Leu Leu
                 35   40   45

Gly Pro Ser Leu Glu Asp Leu Phe Asn Phe Cys Ser Arg Lys Phe Ser
                 50   55   60

```
Leu Lys Thr Val Leu Leu Leu Ala Asp Gln Met Ile Ser Arg Ile Glu
65              70              75                      80

Tyr Ile His Ser Lys Asn Phe Ile His Arg Asp Val Lys Pro Asp Asn
            85                  90                  95

Phe Leu Met Gly Leu Gly Lys Lys Gly Asn Leu Val Tyr Ile Ile Asp
            100             105             110

Phe Gly Leu Ala Lys Lys Tyr Arg Asp Ala Arg Thr His Gln His Ile
        115             120             125

Pro Tyr Arg Glu Asn Lys Asn Leu Thr Gly Thr Ala Arg Tyr Ala Ser
    130             135             140

Ile Asn Thr His Leu Gly Ile Glu Gln Ser Arg Arg Asp Asp Leu Glu
145             150             155             160

Ser Leu Gly Tyr Val Leu Met Tyr Phe Asn Leu Gly Ser Leu Pro Trp
            165             170             175

Gln Gly Leu Lys Ala Ala Thr Lys Arg Gln Lys Tyr Glu Arg Ile Ser
        180             185             190

Glu Lys Lys Met Ser Thr Pro Ile Glu Val Leu Cys Lys Gly Tyr Pro
    195             200             205

Ser Glu Phe Ala Thr Tyr Leu Asn Phe Cys Arg Ser Leu Arg Phe Asp
    210             215             220

Asp Lys Pro Asp Tyr Ser Tyr Leu Arg Gln Leu Phe Arg Asn Leu Phe
225             230             235             240

His Arg Gln Gly Phe Ser Tyr Asp Tyr Val Phe Asp Trp Asn Met Leu
            245             250             255

Lys Phe Gly Ala Ser Arg Ala Ala Asp Asp Ala Glu Arg Asp Ala Gly
        260             265             270

Asp Arg Glu Glu Arg Leu Arg His Ser Arg Asn Pro Ala Thr Arg Gly
    275             280             285

Leu Pro Ser Thr Ala Ser Gly Arg Leu Arg Gly Arg Arg Lys Val Ala
    290             295             300

Pro Pro Thr Pro Leu Thr Pro Thr Ser His Thr Ala Asn Thr Ser Pro
305             310             315             320

Arg Pro Val Ser Gly Met Glu Arg Glu Arg Lys Val Ser Met Arg Leu
            325             330             335

His Arg Gly Ala Pro Val Asn Ile Ser Ser Ser Asp Leu Thr Gly Arg
        340             345             350

Gln Asp Thr Ser Arg Met Ser Thr Ser Gln Ile Pro Gly Arg Val Ala
    355             360             365
```

Ser Ser Gly Leu Gln Ser Val Val His Arg
    370   375

<210>   131
<211>   561
<212>   PRT
<213>   Homo sapiens

<400>   131

Met Val Glu Trp Trp Ser Ala Leu Thr Cys Pro Leu Gln Thr Phe Ala
1   5   10   15

Ala Pro Ser Phe Asp Asp Lys Ile Leu Glu Val Val Ala Val Phe Gly
            20   25   30

Ser Met Gln Met Ala Val Ser Arg Val Ile Arg Leu Gln His His Arg
        35   40   45

Ile Ala Gln Cys Arg Thr Val Lys Ile Ser Ile Leu Gly Asp Glu Gly
    50   55   60

Val Pro Val Gln Val Asp Gly Glu Ala Trp Val Gln Pro Pro Gly Tyr
65   70   75   80

Ile Arg Ile Val His Lys Asn Arg Ala Gln Thr Leu Thr Arg Asp Arg
            85   90   95

Ala Phe Glu Ser Thr Leu Lys Ser Trp Glu Asp Lys Gln Lys Cys Glu
            100   105   110

Leu Pro Arg Pro Pro Ser Cys Ser Leu His Pro Glu Met Leu Ser Glu
        115   120   125

Glu Glu Ala Thr Gln Met Asp Gln Phe Gly Gln Ala Ala Gly Val Leu
    130   135   140

Ile His Ser Ile Arg Glu Ile Ala Gln Ser His Arg Asp Met Glu Gln
145   150   155   160

Glu Leu Ala His Ala Val Asn Ala Ser Ser Lys Ser Met Asp Arg Val
            165   170   175

Tyr Gly Lys Pro Arg Thr Thr Glu Gly Leu Asn Cys Ser Phe Val Leu
        180   185   190

Glu Met Val Asn Asn Phe Arg Ala Leu Arg Ser Glu Thr Glu Leu Leu
        195   200   205

Leu Ser Gly Lys Met Ala Leu Gln Leu Asp Pro Pro Gln Lys Glu Gln
    210   215   220

Leu Gly Ser Ala Leu Ala Glu Met Asp Arg Gln Leu Arg Arg Leu Ala
225   230   235   240

Asp Thr Pro Trp Leu Cys Gln Ser Ala Glu Pro Gly Asp Glu Glu Ser
            245   250   255

Val Met Leu Asp Leu Ala Lys Arg Ser Arg Ser Gly Lys Phe Arg Leu
     260   265   270

Val Thr Lys Phe Lys Lys Glu Lys Asn Asn Lys Asn Lys Glu Ala His
     275   280   285

Ser Ser Leu Gly Ala Pro Val His Leu Trp Gly Thr Glu Glu Val Ala
     290   295   300

Ala Trp Leu Glu His Leu Ser Leu Cys Glu Tyr Lys Asp Ile Phe Thr
305   310   315   320

Arg His Asp Ile Arg Gly Ser Glu Leu Leu His Leu Glu Arg Arg Asp
          325   330   335

Leu Lys Asp Leu Gly Val Thr Lys Val Gly His Met Lys Arg Ile Leu
          340   345   350

Cys Gly Ile Lys Glu Leu Ser Arg Ser Ala Pro Ala Val Glu Ala Gln
          355   360   365

Pro Leu Ser Ser Gln Pro Val Ala Ser Thr Ser Pro Pro Pro Arg Pro
          370   375   380

Ser Leu Arg Pro Leu Ser Leu Trp Pro Leu Arg Leu Leu Pro Leu Arg
385   390   395   400

Pro Trp Ala Asp Ala Ala Ala Arg Pro Leu Leu Met Val Leu Leu Pro
          405   410   415

Leu Ser Ala Thr Glu Ser Leu Arg Asp Thr Val His Gln Ser Ser Gly
          420   425   430

Val Ser Asn Ile Thr Thr Gln Leu Pro Leu Lys Gln His Phe Leu Gln
          435   440   445

Leu Arg Val Thr Trp Gly Thr Cys Val Thr Ala Thr Gln Leu Ser Pro
          450   455   460

Ala Cys Ala Val Gly Gln Gly Ile Gln Arg Arg Leu Ala Ser Trp Ala
465   470   475   480

Leu Leu Ala Trp Pro Arg Ala Trp Ile Val Pro Gly Ala Pro Leu Arg
          485   490   495

Val Ser Phe Cys Gly Arg Thr Val Trp Leu Arg Leu Leu Ala Pro Ser
          500   505   510

Gln Phe Ser Glu Thr Trp Leu Gly Pro Ser Thr Ala Ala Cys Lys Gly
          515   520   525

Pro Cys Leu Leu Met Gln Leu Leu Leu Asn Lys Asn Arg Ala Leu Ser
          530   535   540

Trp Phe Glu Ser Ser Met Asp Val Ser Ser Leu Val Asp Cys Asn Leu
545   550   555   560

Thr

<210>   132
<211>   213
<212>   PRT
<213>   Homo sapiens

<400>   132

Met Ser Asp Val Ala Ile Val Lys Glu Gly Trp Leu His Lys Arg Gly
1   5   10   15

Glu Tyr Ile Lys Thr Trp Arg Pro Arg Tyr Phe Leu Leu Lys Asn Asp
            20   25   30

Gly Thr Phe Ile Gly Tyr Lys Glu Arg Pro Gln Asp Val Asp Gln Arg
        35   40   45

Glu Ala Pro Leu Asn Asn Phe Ser Val Ala Gln Cys Gln Leu Met Lys
        50   55   60

Thr Glu Arg Pro Arg Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp
65   70   75   80

Thr Thr Val Ile Glu Arg Thr Phe His Val Glu Thr Pro Glu Glu Arg
                85   90   95

Glu Glu Trp Thr Thr Ala Ile Gln Thr Val Ala Asp Gly Leu Lys Lys
            100   105   110

Gln Glu Glu Glu Glu Met Asp Phe Arg Ser Gly Ser Pro Ser Asp Asn
            115   120   125

Ser Gly Ala Glu Glu Met Glu Val Ser Leu Ala Lys Pro Lys His Arg
        130   135   140

Val Ala Leu Gly Gly Arg Ala Gly Pro Ala His Val Ser Pro His Ser
145   150   155   160

Val Ser Gln Pro Pro Trp Ala Val Cys His Gln Leu Ser Val Ile Ser
            165   170   175

Leu Gly Pro Trp Ala Ser Val Gln Pro Gly Gly Thr Arg Cys Asn Leu
            180   185   190

Thr Met Val Cys Trp Pro Ala Pro Ser Pro Gly Gly Gly Arg His Thr
            195   200   205

Ala Ala Pro Gln His
        210

<210>   133
<211>   425
<212>   PRT
<213>   Homo sapiens

<400> 133

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Met Ile Val His Asp Asp Val Glu Ser Glu Pro Ala Met Thr Pro Ser
1               5                   10              15

Lys Glu Gly Thr Leu Ile Val Arg Gln Thr Gln Ser Ala Ser Ser Thr
            20              25              30

Leu Gln Lys His Lys Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro
        35              40              45

Arg Leu Leu Gln Ile Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val
    50              55              60

Val Gly Phe Ser Cys Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp
65              70              75              80

Pro Thr Arg Lys Gly Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg
            85              90              95

Pro Gln Ser Asp Thr Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn
            100             105             110

Ser Glu Ile Leu Cys Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly
        115             120             125

Thr Glu Ser Gly Leu Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val
    130             135             140

Tyr Pro Leu Ile Asn Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu
145             150             155             160

Gly Leu Asn Val Leu Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg
            165             170             175

Val Tyr Tyr Leu Ser Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro
        180             185             190

Glu Val Glu Lys Lys Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly
        195             200             205

Cys Val His Tyr Lys Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val
    210             215             220

Ile Ala Leu Lys Ser Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro
225             230             235             240

Tyr His Lys Phe Met Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys
            245             250             255

Pro Leu Leu Val Asp Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val
            260             265             270

Ile Tyr Gly Ser Cys Ala Gly Phe His Ala Val Asp Val Asp Ser Gly
    275             280             285
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```
Ser Val Tyr Asp Ile Tyr Leu Pro Thr His Ile Gln Cys Ser Ile Lys
    290                 295             300

Pro His Ala Ile Ile Ile Leu Pro Asn Thr Asp Gly Met Glu Leu Leu
305                 310             315                 320

Val Cys Tyr Glu Asp Glu Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile
            325             330             335

Thr Lys Asp Val Val Leu Gln Trp Gly Glu Met Pro Thr Ser Val Ala
            340             345             350

Tyr Ile Arg Ser Asn Gln Thr Met Gly Trp Gly Glu Lys Ala Ile Glu
            355             360             365

Ile Arg Ser Val Glu Thr Gly His Leu Asp Gly Val Phe Met His Lys
    370             375             380

Arg Ala Gln Arg Leu Lys Phe Leu Cys Glu Arg Asn Asp Lys Val Phe
385             390             395                 400

Phe Ala Ser Val Arg Ser Gly Gly Ser Ser Gln Val Tyr Phe Met Thr
            405             410             415

Leu Gly Arg Thr Ser Leu Leu Ser Trp
            420             425

<210>   134
<211>   515
<212>   PRT
<213>   Homo sapiens

<400>   134

Met Ala Ser Arg Thr Pro Arg Asn Cys Ala Val Leu Lys Gly Glu Val
1               5               10              15

Asp Leu Thr Ala Leu Ala Lys Glu Leu Arg Ala Val Glu Asp Val Arg
            20              25              30

Pro Pro His Lys Val Thr Asp Tyr Ser Ser Ser Ser Glu Glu Ser Gly
            35              40              45

Thr Thr Asp Glu Glu Asp Asp Val Glu Gln Glu Gly Ala Asp Glu
    50              55              60

Ser Thr Ser Gly Pro Glu Asp Thr Arg Ala Ala Ser Ser Leu Asn Leu
65              70              75                  80

Ser Asn Gly Glu Thr Glu Ser Val Lys Thr Met Ile Val His Asp Asp
                85              90                  95

Val Glu Ser Glu Pro Ala Met Thr Pro Ser Lys Glu Gly Thr Leu Ile
            100             105             110

Val Arg Gln Thr Gln Ser Ala Ser Ser Thr Leu Gln Lys His Lys Ser
            115             120             125
```

```
Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu Leu Gln Ile Ser
    130             135             140
Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser Cys Asp
145             150             155             160
Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys Gly Ser
                165             170             175
Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp Thr Pro
            180             185             190
Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu Cys Ala
            195             200             205
Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly Leu Met
    210             215             220
Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile Asn Arg
225             230             235             240
Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val Leu Val
            245             250             255
Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu Ser Trp
            260             265             270
Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys Lys Gln
            275             280             285
Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr Lys Val
            290             295             300
Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys Ser Ser
305             310             315             320
Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe Met Ala
            325             330             335
Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val Asp Leu
            340             345             350
Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser Cys Ala
            355             360             365
Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp Ile Tyr
    370             375             380
Leu Pro Thr His Ile Gln Cys Ser Ile Lys Pro His Ala Ile Ile Ile
385             390             395             400
Leu Pro Asn Thr Asp Gly Met Glu Leu Leu Val Cys Tyr Glu Asp Glu
            405             410             415
Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile Thr Lys Asp Val Val Leu
            420             425             430
```

Gln Trp Gly Glu Met Pro Thr Ser Val Ala Tyr Ile Arg Ser Asn Gln
435 440 445

Thr Met Gly Trp Gly Glu Lys Ala Ile Glu Ile Arg Ser Val Glu Thr
450 455 460

Gly His Leu Asp Gly Val Phe Met His Lys Arg Ala Gln Arg Leu Lys
465 470 475 480

Phe Leu Cys Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg Ser
485 490 495

Gly Gly Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser Leu
500 505 510

Leu Ser Trp
515

<210> 135
<211> 468
<212> PRT
<213> Homo sapiens

<400> 135

Met Ser Ala Arg Val Gln Leu Thr Lys Ser Val Pro Ala Ile Met Arg
1 5 10 15

Ala Met Ala Leu Arg Phe Ala Phe Thr Ser Cys Gln Ile Ser Tyr Ser
20 25 30

Lys Ala Ile Pro Pro Pro Leu Pro Pro Pro Pro Pro His Pro Pro
35 40 45

Ala Ser Arg His Pro Pro Cys Pro His Arg His Pro Arg Asp Lys Leu
50 55 60

Thr Ala Asn Glu Thr Gln Ser Ala Ser Ser Thr Leu Gln Lys His Lys
65 70 75 80

Ser Ser Ser Ser Phe Thr Pro Phe Ile Asp Pro Arg Leu Leu Gln Ile
85 90 95

Ser Pro Ser Ser Gly Thr Thr Val Thr Ser Val Val Gly Phe Ser Cys
100 105 110

Asp Gly Met Arg Pro Glu Ala Ile Arg Gln Asp Pro Thr Arg Lys Gly
115 120 125

Ser Val Val Asn Val Asn Pro Thr Asn Thr Arg Pro Gln Ser Asp Thr
130 135 140

Pro Glu Ile Arg Lys Tyr Lys Lys Arg Phe Asn Ser Glu Ile Leu Cys
145 150 155 160

Ala Ala Leu Trp Gly Val Asn Leu Leu Val Gly Thr Glu Ser Gly Leu

```
                    165                      170                      175

Met Leu Leu Asp Arg Ser Gly Gln Gly Lys Val Tyr Pro Leu Ile Asn
        180                  185                  190

Arg Arg Arg Phe Gln Gln Met Asp Val Leu Glu Gly Leu Asn Val Leu
        195                  200                  205

Val Thr Ile Ser Gly Lys Lys Asp Lys Leu Arg Val Tyr Tyr Leu Ser
    210                  215                  220

Trp Leu Arg Asn Lys Ile Leu His Asn Asp Pro Glu Val Glu Lys Lys
225                  230                  235                  240

Gln Gly Trp Thr Thr Val Gly Asp Leu Glu Gly Cys Val His Tyr Lys
                245                  250                  255

Val Val Lys Tyr Glu Arg Ile Lys Phe Leu Val Ile Ala Leu Lys Ser
            260                  265                  270

Ser Val Glu Val Tyr Ala Trp Ala Pro Lys Pro Tyr His Lys Phe Met
            275                  280                  285

Ala Phe Lys Ser Phe Gly Glu Leu Val His Lys Pro Leu Leu Val Asp
        290                  295                  300

Leu Thr Val Glu Glu Gly Gln Arg Leu Lys Val Ile Tyr Gly Ser Cys
305                  310                  315                  320

Ala Gly Phe His Ala Val Asp Val Asp Ser Gly Ser Val Tyr Asp Ile
                325                  330                  335

Tyr Leu Pro Thr His Ile Gln Cys Ser Ile Lys Pro His Ala Ile Ile
            340                  345                  350

Ile Leu Pro Asn Thr Asp Gly Met Glu Leu Leu Val Cys Tyr Glu Asp
            355                  360                  365

Glu Gly Val Tyr Val Asn Thr Tyr Gly Arg Ile Thr Lys Asp Val Val
    370                  375                  380

Leu Gln Trp Gly Glu Met Pro Thr Ser Val Ala Tyr Ile Arg Ser Asn
385                  390                  395                  400

Gln Thr Met Gly Trp Gly Glu Lys Ala Ile Glu Ile Arg Ser Val Glu
                405                  410                  415

Thr Gly His Leu Asp Gly Val Phe Met His Lys Arg Ala Gln Arg Leu
            420                  425                  430

Lys Phe Leu Cys Glu Arg Asn Asp Lys Val Phe Phe Ala Ser Val Arg
        435                  440                  445

Ser Gly Gly Ser Ser Gln Val Tyr Phe Met Thr Leu Gly Arg Thr Ser
    450                  455                  460

Leu Leu Ser Trp
```

465

<210> 136
<211> 666
<212> PRT
<213> Homo sapiens

<220>
<221> -
<222> (1)..(666)
<223> "XAA" can be any amino acid

<400> 136

Met Asp Cys Gln Leu Ser Ile Leu Leu Leu Leu Ser Cys Ser Val Leu
1   5   10   15

Asp Ser Phe Gly Glu Leu Ile Pro Gln Pro Ser Asn Glu Val Asn Leu
            20   25   30

Leu Asp Ser Lys Thr Ile Gln Gly Glu Leu Gly Trp Ile Ser Tyr Pro
            35   40   45

Ser His Gly Trp Glu Glu Ile Ser Gly Val Asp Glu His Tyr Thr Pro
        50   55   60

Ile Arg Thr Tyr Gln Val Cys Asn Val Met Asp His Ser Gln Asn Asn
65   70   75   80

Trp Leu Arg Thr Asn Trp Val Pro Arg Asn Ser Ala Gln Lys Ile Tyr
                85   90   95

Val Glu Leu Lys Phe Thr Leu Arg Asp Cys Asn Ser Ile Pro Leu Val
            100   105   110

Leu Gly Thr Cys Lys Glu Thr Phe Asn Leu Tyr Tyr Met Glu Ser Asp
            115   120   125

Asp Asp His Gly Val Lys Phe Arg Glu His Gln Phe Thr Lys Ile Asp
        130   135   140

Thr Ile Ala Ala Asp Glu Ser Phe Thr Gln Met Asp Leu Gly Asp Arg
145   150   155   160

Ile Leu Lys Leu Asn Thr Glu Ile Arg Glu Val Gly Pro Val Asn Lys
                165   170   175

Lys Gly Phe Tyr Leu Ala Phe Gln Asp Val Gly Ala Cys Val Ala Leu
            180   185   190

Val Ser Val Arg Val Tyr Phe Lys Lys Cys Pro Phe Thr Val Lys Asn
            195   200   205

Leu Ala Met Phe Pro Asp Thr Val Pro Met Asp Ser Gln Ser Leu Val
        210   215   220

```
Glu Val Arg Gly Ser Cys Val Asn Asn Ser Lys Glu Glu Asp Pro Pro
225                 230             235                 240

Arg Met Tyr Cys Ser Thr Glu Gly Glu Trp Leu Val Pro Ile Gly Lys
            245             250                 255

Cys Ser Cys Asn Ala Gly Tyr Glu Glu Arg Gly Phe Met Cys Gln Ala
        260             265                 270

Cys Arg Pro Gly Phe Tyr Lys Ala Leu Asp Gly Asn Met Lys Cys Ala
        275             280                 285

Lys Cys Pro Pro His Ser Ser Thr Gln Glu Asp Gly Ser Met Asn Cys
    290             295                 300

Arg Cys Glu Asn Asn Tyr Phe Arg Ala Asp Lys Asp Pro Pro Ser Met
305             310             315                 320

Ala Cys Thr Arg Pro Pro Ser Ser Pro Arg Asn Val Ile Ser Asn Ile
            325             330                 335

Asn Glu Thr Ser Val Ile Leu Asp Trp Ser Trp Pro Leu Asp Thr Gly
            340             345                 350

Gly Arg Lys Asp Val Thr Phe Asn Ile Ile Cys Lys Lys Cys Gly Trp
        355             360                 365

Asn Ile Lys Gln Cys Glu Pro Cys Ser Pro Asn Val Arg Phe Leu Pro
    370             375                 380

Arg Gln Phe Gly Leu Thr Asn Thr Thr Val Thr Val Thr Asp Leu Leu
385                 390             395                 400

Ala His Thr Asn Tyr Thr Phe Glu Ile Asp Ala Val Asn Gly Val Ser
            405             410                 415

Glu Leu Ser Ser Pro Pro Arg Gln Phe Ala Ala Val Ser Ile Thr Thr
            420             425                 430

Asn Gln Ala Ala Pro Ser Pro Val Leu Thr Ile Lys Lys Asp Arg Thr
        435             440                 445

Ser Arg Asn Ser Ile Ser Leu Ser Trp Gln Glu Pro Glu His Pro Asn
    450             455             460

Gly Ile Ile Leu Asp Tyr Glu Val Lys Tyr Tyr Glu Lys Gln Glu Gln
465             470             475                 480

Glu Thr Ser Tyr Thr Ile Leu Arg Ala Arg Gly Thr Asn Val Thr Ile
            485             490                 495

Ser Ser Leu Lys Pro Asp Thr Ile Tyr Val Phe Gln Ile Arg Ala Arg
        500             505                 510

Thr Ala Ala Gly Tyr Gly Thr Asn Ser Arg Lys Phe Glu Phe Glu Thr
        515             520                 525
```

Ser Pro Asp Ser Phe Ser Ile Ser Gly Glu Ser Ser Gln Val Val Met
    530   535   540

Ile Ala Ile Ser Ala Ala Val Ala Ile Ile Leu Leu Thr Val Val Ile
545   550   555   560

Tyr Val Leu Ile Gly Arg Phe Cys Gly Tyr Lys Ser Lys His Gly Ala
          565   570   575

Asp Glu Lys Arg Leu His Phe Gly Asn Gly His Leu Lys Leu Pro Gly
          580   585   590

Leu Arg Thr Tyr Val Asp Pro His Thr Tyr Glu Asp Pro Thr Gln Ala
          595   600   605

Val His Glu Phe Ala Lys Glu Leu Asp Ala Thr Asn Ile Ser Ile Asp
    610   615   620

Lys Val Val Gly Ala Val Leu Thr Ser Glu Gln Leu His Asp Ala Glu
625   630   635   640

Xaa Phe Ser Leu Ala Gly Phe Asn Val Ser Ser Gln Gly Val His Phe
          645   650   655

Ser Pro Ala Arg Ser Leu Pro Val Ala Asn
          660   665

<210>   137
<211>   458
<212>   PRT
<213>   Homo sapiens

<400>   137

Met Lys Tyr Thr Phe Trp Gly Trp Val Ala Val Val Lys Leu Lys Asn
1   5   10   15

Ala Asp Lys Val Phe Ala Met Lys Ile Leu Asn Lys Trp Glu Met Leu
          20   25   30

Lys Arg Ala Glu Thr Ala Cys Phe Arg Glu Glu Arg Asp Val Leu Val
          35   40   45

Asn Gly Asp Asn Lys Trp Ile Thr Thr Leu His Tyr Ala Phe Gln Asp
    50   55   60

Asp Asn Asn Leu Tyr Leu Val Met Asp Tyr Tyr Val Gly Gly Asp Leu
65   70   75   80

Leu Thr Leu Leu Ser Lys Phe Glu Asp Arg Leu Pro Glu Asp Met Ala
          85   90   95

Arg Phe Tyr Leu Ala Glu Met Val Ile Ala Ile Asp Ser Val His Gln
          100   105   110

Leu His Tyr Val His Arg Asp Ile Lys Pro Asp Asn Ile Leu Met Asp
          115   120   125

```
Met Asn Gly His Ile Arg Leu Ala Asp Phe Gly Ser Cys Leu Lys Leu
    130                 135                 140

Met Glu Asp Gly Thr Val Gln Ser Ser Val Ala Val Gly Thr Pro Asp
145                 150                 155                 160

Tyr Ile Ser Pro Glu Ile Leu Gln Ala Met Glu Asp Gly Lys Gly Arg
                165                 170                 175

Tyr Gly Pro Glu Cys Asp Trp Trp Ser Leu Gly Val Cys Met Tyr Glu
                180                 185                 190

Met Leu Tyr Gly Glu Thr Pro Phe Tyr Ala Glu Ser Leu Val Glu Thr
        195                 200                 205

Tyr Gly Lys Ile Met Asn His Lys Glu Arg Phe Gln Phe Pro Ala Gln
    210                 215                 220

Val Thr Asp Val Ser Glu Asn Ala Lys Asp Leu Ile Arg Arg Leu Ile
225                 230                 235                 240

Cys Ser Arg Glu His Arg Leu Gly Gln Asn Gly Ile Glu Asp Phe Lys
                245                 250                 255

Lys His Pro Phe Phe Ser Gly Ile Asp Trp Asp Asn Ile Arg Asn Cys
                260                 265                 270

Glu Ala Pro Tyr Ile Pro Glu Val Ser Ser Pro Thr Asp Thr Ser Asn
        275                 280                 285

Phe Asp Val Asp Asp Asp Cys Leu Lys Asn Ser Glu Thr Met Pro Pro
    290                 295                 300

Pro Thr His Thr Ala Phe Ser Gly His His Leu Pro Phe Val Gly Phe
305                 310                 315                 320

Thr Tyr Thr Ser Ser Cys Val Leu Ser Asp Arg Ser Cys Leu Arg Val
                325                 330                 335

Thr Ala Gly Pro Thr Ser Leu Asp Leu Asp Val Asn Val Gln Arg Thr
        340                 345                 350

Leu Asp Asn Asn Leu Ala Thr Glu Ala Tyr Glu Arg Arg Ile Lys Arg
        355                 360                 365

Leu Glu Gln Glu Lys Leu Glu Leu Ser Arg Lys Leu Gln Glu Ser Thr
    370                 375                 380

Gln Thr Val Gln Ala Leu Gln Tyr Ser Thr Val Asp Gly Pro Leu Thr
385                 390                 395                 400

Ala Ser Lys Asp Leu Glu Ile Lys Asn Leu Lys Glu Glu Ile Glu Lys
                405                 410                 415

Leu Arg Lys Gln Val Thr Glu Ser Ser His Leu Glu Gln Gln Leu Glu
                420                 425                 430
```

Glu Ala Asn Ala Val Arg Gln Glu Leu Asp Asp Ala Phe Arg Gln Ile
        435   440   445

Lys Ala Tyr Glu Lys Gln Ile Lys Thr Leu
    450   455

<210>   138
<211>   262
<212>   PRT
<213>   Homo sapiens

<400>   138

Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu
1   5   10   15

Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr
            20   25   30

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys
        35   40   45

Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys
    50   55   60

Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu
65   70   75   80

Lys Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys
            85   90   95

Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
            100   105   110

Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val
        115   120   125

Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro
    130   135   140

Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Ser Pro Ser Arg Arg
145   150   155   160

Gly Gly Arg His Ala Ser Val Pro Thr Thr Pro Gln Asp Leu Arg Ser
            165   170   175

Ala Leu Gln Gly Arg Ala Gly Gly Gln Gln Gly Pro Gly Ala Ala Leu
            180   185   190

Pro Pro Arg Pro Pro Gly Ser Ala Arg Gly Leu Leu Thr Ser Gln Pro
        195   200   205

Arg Ala Glu Pro Ser Arg Ala Gly Val Gly Gly Gly Arg Arg Pro Pro
    210   215   220

Cys Thr Leu Cys Gly Asp Tyr Trp Pro Arg Pro Trp Pro Arg Ala Pro

Gln Gly Ala Gln Arg Arg Pro Ala Ala Pro Pro Gln Thr Ser Trp Arg
                245   250   255

Val Trp Arg Pro Gly Ser
            260

<210> 139
<211> 203
<212> PRT
<213> Homo sapiens

<400> 139

Met Glu Val Val Asp Pro Gln Gln Leu Gly Met Phe Thr Glu Gly Glu
1   5   10   15

Leu Met Ser Val Gly Met Asp Thr Phe Ile His Arg Ile Asp Ser Thr
                20   25   30

Glu Val Ile Tyr Gln Pro Arg Arg Lys Arg Ala Lys Leu Ile Gly Lys
            35   40   45

Tyr Leu Met Gly Asp Leu Leu Gly Glu Gly Ser Tyr Gly Lys Val Lys
    50   55   60

Glu Val Leu Asp Ser Glu Thr Leu Cys Arg Arg Ala Val Lys Ile Leu
65   70   75   80

Lys Lys Lys Lys Leu Arg Arg Ile Pro Asn Gly Glu Ala Asn Val Lys
                85   90   95

Lys Glu Ile Gln Leu Leu Arg Arg Leu Arg His Lys Asn Val Ile Gln
            100   105   110

Leu Val Asp Val Leu Tyr Asn Glu Glu Lys Gln Lys Met Tyr Met Val
        115   120   125

Met Glu Tyr Cys Val Cys Gly Met Gln Glu Met Leu Asp Ser Val Pro
    130   135   140

Glu Lys Arg Phe Pro Val Cys Gln Ala His Gly Tyr Phe Cys Gln Leu
145   150   155   160

Ile Asp Gly Leu Glu Tyr Leu His Ser Gln Gly Ile Val His Lys Asp
            165   170   175

Ile Lys Pro Gly Asn Leu Leu Leu Thr Thr Gly Gly Thr Leu Lys Ile
            180   185   190

Ser Asp Leu Gly Val Ala Glu Val Gly Thr Cys
        195   200

<210> 140
<211> 244
<212> PRT

<213> Homo sapiens

<400> 140

```
Met Asp Arg Glu Thr Thr Pro Leu Gly Leu Leu Trp Leu Ile Gln Val
1               5                   10                  15

Ile Pro Ser Lys Leu Leu Pro Ser Leu Gln Val Lys Asp Phe Leu Ser
                20                  25                  30

Gln Leu Arg Ser Ser Asn Arg Arg Phe Ser Ile Pro Glu Ser Gly Gln
            35                  40                  45

Gly Gly Thr Glu Met Asp Gly Phe Arg Arg Thr Ile Glu Asn Gln His
        50                  55                  60

Ser Arg Asn Asp Val Met Val Ser Glu Trp Leu Asn Lys Leu Asn Leu
65                  70                  75                  80

Glu Glu Pro Pro Ser Ser Val Pro Lys Lys Cys Pro Ser Leu Thr Lys
                85                  90                  95

Arg Ser Arg Ala Gln Glu Glu Gln Val Pro Gln Ala Trp Thr Ala Gly
            100                 105                 110

Thr Ser Ser Asp Ser Met Ala Gln Pro Pro Gln Thr Pro Glu Thr Ser
            115                 120                 125

Thr Phe Arg Asn Gln Met Pro Ser Pro Thr Ser Thr Gly Thr Pro Ser
            130                 135                 140

Pro Gly Pro Arg Gly Asn Gln Gly Ala Glu Arg Gln Gly Met Asn Trp
145                 150                 155                 160

Ser Cys Arg Thr Pro Glu Pro Asn Pro Val Thr Gly Arg Pro Leu Val
                165                 170                 175

Asn Ile Tyr Asn Cys Ser Gly Val Gln Val Gly Asp Asn Asn Tyr Leu
            180                 185                 190

Thr Met Gln Gln Thr Thr Ala Leu Pro Thr Trp Gly Leu Ala Pro Ser
            195                 200                 205

Gly Lys Gly Arg Gly Leu Gln His Pro Pro Pro Val Gly Ser Gln Glu
    210                 215                 220

Gly Pro Lys Asp Pro Glu Ala Trp Ser Arg Pro Gln Gly Trp Tyr Asn
225                 230                 235                 240

His Ser Gly Lys
```

<210> 141
<211> 222
<212> PRT
<213> Homo sapiens

<400> 141

Met Val Lys Leu Tyr Leu Tyr Gln Lys Asn Val Lys Ile Ala Ile Phe
1   5   10   15

Asp Leu Lys Ser Arg Gln Asn Phe Phe Val Tyr Phe Arg Glu Glu Gln
            20   25   30

Ala Arg Glu Leu Tyr Arg Arg Leu Arg Glu Lys Pro Arg Asp Gln Arg
        35   40   45

Thr Glu Gly Asp Ser Gln Glu Met Val Arg Leu Leu Leu Gln Ala Ile
    50   55   60

Gln Ser Phe Glu Lys Lys Val Arg Val Ile Tyr Thr Gln Leu Ser Lys
65   70   75   80

Thr Val Val Cys Lys Gln Lys Ala Leu Glu Leu Leu Pro Lys Val Glu
                85   90   95

Glu Val Val Ser Leu Met Asn Glu Asp Glu Lys Thr Val Val Arg Leu
                100   105   110

Gln Glu Lys Arg Gln Lys Glu Leu Trp Asn Leu Leu Lys Ile Ala Cys
        115   120   125

Ser Lys Val Arg Gly Pro Val Ser Gly Ser Pro Asp Ser Met Asn Ala
    130   135   140

Ser Arg Leu Ser Gln Pro Gly Gln Leu Met Ser Gln Pro Ser Thr Ala
145   150   155   160

Ser Asn Ser Leu Pro Glu Pro Ala Lys Lys Ser Glu Glu Leu Val Ala
                165   170   175

Glu Ala His Asn Leu Cys Thr Leu Leu Glu Asn Ala Ile Gln Asp Thr
                180   185   190

Val Arg Glu Gln Asp Gln Ser Phe Thr Ala Leu Asp Trp Ser Trp Leu
        195   200   205

Gln Thr Glu Glu Glu Glu His Ser Cys Leu Glu Gln Ala Ser
    210   215   220

<210>   142
<211>   409
<212>   PRT
<213>   Homo sapiens

<400>   142

Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly
1   5   10   15

Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile
            20   25   30

```
Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp
        35              40              45

Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr
    50              55              60

Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr
65              70              75              80

Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val
            85              90              95

Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu
        100             105             110

Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu
        115             120             125

His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr
    130             135             140

Pro Val Ile Glu Gln Ile Leu Pro Asp Ser Pro Gly Ser His Leu Pro
145             150             155             160

His Thr Val Thr Leu Val Ser Ile Pro Ala Ser Ser His Gly Lys Arg
            165             170             175

Gly Leu Ser Val Ser Ile Asp Pro Pro His Gly Pro Pro Gly Cys Gly
        180             185             190

Thr Glu His Ser His Thr Val Arg Val Gln Gly Val Asp Pro Gly Cys
    195             200             205

Met Ser Pro Asp Val Lys Asn Ser Ile His Val Gly Asp Arg Ile Leu
    210             215             220

Glu Ile Asn Gly Thr Pro Ile Arg Asn Val Pro Leu Asp Glu Ile Asp
225             230             235             240

Leu Leu Ile Gln Glu Thr Ser Arg Leu Leu Gln Leu Thr Leu Glu His
            245             250             255

Asp Pro His Asp Thr Leu Gly His Gly Leu Gly Pro Glu Thr Ser Pro
        260             265             270

Leu Ser Ser Pro Ala Tyr Thr Pro Ser Gly Glu Ala Gly Ser Ser Ala
        275             280             285

Arg Gln Lys Pro Val Leu Arg Ser Cys Ser Ile Asp Arg Ser Pro Gly
    290             295             300

Ala Gly Ser Leu Gly Ser Pro Ala Ser Gln Arg Lys Asp Leu Gly Arg
305             310             315             320

Ser Glu Ser Leu Arg Val Val Cys Arg Pro His Arg Ile Phe Arg Pro
            325             330             335
```

```
Ser Asp Leu Ile His Gly Glu Val Leu Gly Lys Gly Cys Phe Gly Gln
            340                 345                 350

Ala Ile Lys Val Gln Ser Met Pro Gly Ser Gln Leu Asp Ser Leu Gly
            355                 360                 365

Gly Thr Pro Pro Ser Ser Phe Leu Pro Ser Leu Trp Lys His Ser Gly
            370                 375                 380

Arg Gly Ile Trp Leu Ser Asp Ser Leu Ala Ser Ala Leu Ser Ser Leu
385                 390                 395                 400

Gly Leu Leu Glu Leu Ile Arg Asn Arg
                405
```

<210> 143
<211> 305
<212> PRT
<213> Homo sapiens

<400> 143

```
Met Arg Leu Thr Leu Leu Cys Cys Thr Trp Arg Glu Glu Arg Met Gly
1               5               10                  15

Glu Glu Gly Ser Glu Leu Pro Val Cys Ala Ser Cys Gly Gln Arg Ile
            20                  25                  30

Tyr Asp Gly Gln Tyr Leu Gln Ala Leu Asn Ala Asp Trp His Ala Asp
            35                  40                  45

Cys Phe Arg Cys Cys Asp Cys Ser Ala Ser Leu Ser His Gln Tyr Tyr
    50                  55                  60

Glu Lys Asp Gly Gln Leu Phe Cys Lys Lys Asp Tyr Trp Ala Arg Tyr
65                  70                  75                  80

Gly Glu Ser Cys His Gly Cys Ser Glu Gln Ile Thr Lys Gly Leu Val
                85                  90                  95

Met Val Ala Gly Glu Leu Lys Tyr His Pro Glu Cys Phe Ile Cys Leu
            100                 105                 110

Thr Cys Gly Thr Phe Ile Gly Asp Gly Asp Thr Tyr Thr Leu Val Glu
            115                 120                 125

His Ser Lys Leu Tyr Cys Gly His Cys Tyr Tyr Gln Thr Val Val Thr
            130                 135                 140

Pro Val Ile Glu Gln Ile Leu Pro Asp Ser Pro Gly Ser His Leu Pro
145                 150                 155                 160

His Thr Val Thr Leu Val Ser Ile Pro Ala Ser Ser His Gly Lys Arg
                165                 170                 175

Gly Leu Ser Val Ser Ile Asp Pro Pro His Gly Pro Pro Gly Cys Gly
            180                 185                 190
```

```
Thr Glu His Ser His Thr Val Arg Val Gln Gly Val Asp Pro Gly Cys
        195             200             205

Met Ser Pro Asp Val Lys Asn Ser Ile His Val Gly Asp Arg Ile Leu
    210             215             220

Glu Ile Asn Gly Thr Pro Ile Arg Asn Val Pro Leu Asp Glu Ile Asp
225             230             235             240

Leu Leu Ile Gln Glu Thr Ser Arg Leu Leu Gln Leu Thr Leu Glu His
            245             250             255

Asp Pro His Asp Thr Leu Gly His Gly Leu Gly Pro Glu Thr Ser Pro
            260             265             270

Leu Ser Ser Pro Ala Tyr Thr Pro Ser Gly Glu Ala Gly Ser Ser Ala
            275             280             285

Arg Gln Lys Pro Val Phe Ala Arg Thr Trp Val Ala Leu Ser Pro Ser
        290             295             300

Ala
305

<210>   144
<211>   780
<212>   PRT
<213>   Homo sapiens

<400>   144

Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu
1               5               10              15

Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln
            20              25              30

Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys
        35              40              45

Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr
    50              55              60

Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser
65              70              75              80

Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala
            85              90              95

His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser
            100             105             110

Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val
        115             120             125

Ala Gly Leu Glu Lys Gln Leu Ala Ile Glu Leu Lys Val Lys Gln Gly
```

```
                130                    135                    140

Ala Glu Asn Met Ile Gln Thr Tyr Ser Asn Gly Ser Thr Lys Asp Arg
145                     150                    155                    160

Lys Leu Leu Leu Thr Ala Gln Gln Met Leu Gln Asp Ser Lys Thr Lys
               165                    170                    175

Ile Asp Ile Ile Arg Met Gln Leu Arg Arg Ala Leu Gln Ala Asp Gln
                   180                    185                    190

Leu Glu Asn Gln Ala Ala Pro Asp Asp Thr Gln Gly Ser Pro Asp Leu
               195                    200                    205

Gly Ala Val Glu Leu Arg Ile Glu Glu Leu Arg His His Phe Arg Val
    210                    215                    220

Glu His Ala Val Ala Glu Gly Ala Lys Asn Val Leu Arg Leu Leu Ser
225                    230                    235                    240

Ala Ala Lys Ala Pro Asp Arg Lys Ala Val Ser Glu Ala Gln Glu Lys
                   245                    250                    255

Leu Thr Glu Ser Asn Gln Lys Leu Gly Leu Leu Arg Glu Ala Leu Glu
               260                    265                    270

Arg Arg Leu Gly Glu Leu Pro Ala Asp His Pro Lys Gly Arg Leu Leu
           275                    280                    285

Arg Glu Glu Leu Ala Ala Ala Ser Ser Ala Ala Phe Ser Thr Arg Leu
    290                    295                    300

Ala Gly Pro Phe Pro Ala Thr His Tyr Ser Thr Leu Cys Lys Pro Ala
305                    310                    315                    320

Pro Leu Thr Gly Thr Leu Glu Val Arg Val Val Gly Cys Arg Asp Leu
               325                    330                    335

Pro Glu Thr Ile Pro Trp Asn Pro Thr Pro Ser Met Gly Gly Pro Gly
               340                    345                    350

Thr Pro Asp Ser Arg Pro Pro Phe Leu Ser Arg Pro Ala Arg Gly Leu
           355                    360                    365

Tyr Ser Arg Ser Gly Ser Leu Ser Gly Arg Ser Ser Leu Lys Ala Glu
    370                    375                    380

Ala Glu Asn Thr Ser Glu Val Ser Thr Val Leu Lys Leu Asp Asn Thr
385                    390                    395                    400

Val Val Gly Gln Thr Ser Trp Lys Pro Cys Gly Pro Asn Ala Trp Asp
               405                    410                    415

Gln Ser Phe Thr Leu Glu Leu Glu Arg Ala Arg Glu Leu Glu Leu Ala
           420                    425                    430

Val Phe Trp Arg Asp Gln Arg Gly Leu Cys Ala Leu Lys Phe Leu Lys
```

```
              435                   440                   445

    Leu Glu Asp Phe Leu Asp Asn Glu Arg His Glu Val Gln Leu Asp Met
        450                 455                 460

    Glu Pro Gln Gly Cys Leu Val Ala Glu Val Thr Phe Arg Asn Pro Val
    465                 470                 475                 480

    Ile Glu Arg Ile Pro Arg Leu Arg Arg Gln Lys Lys Ile Phe Ser Lys
                    485                 490                 495

    Gln Gln Gly Lys Ala Phe Gln Arg Ala Arg Gln Met Asn Ile Asp Val
                    500                 505                 510

    Ala Thr Trp Val Arg Leu Leu Arg Arg Leu Ile Pro Asn Ala Thr Gly
            515                 520                 525

    Thr Gly Thr Phe Ser Pro Gly Ala Ser Pro Gly Ser Glu Ala Arg Thr
        530                 535                 540

    Thr Gly Asp Ile Ser Val Glu Lys Leu Asn Leu Gly Thr Asp Ser Asp
    545                 550                 555                 560

    Ser Ser Pro Gln Lys Ser Ser Arg Asp Pro Pro Ser Ser Pro Ser Ser
                    565                 570                 575

    Leu Ser Ser Pro Ile Gln Glu Ser Thr Ala Pro Glu Leu Pro Ser Glu
                580                 585                 590

    Thr Gln Glu Thr Pro Gly Pro Ala Leu Cys Ser Pro Leu Arg Lys Ser
        595                 600                 605

    Pro Leu Thr Leu Glu Asp Phe Lys Phe Leu Ala Val Leu Gly Arg Gly
        610                 615                 620

    His Phe Gly Lys Val Leu Leu Ser Glu Phe Arg Pro Ser Gly Glu Leu
    625                 630                 635                 640

    Phe Ala Ile Lys Ala Leu Lys Lys Gly Asp Ile Val Ala Arg Asp Glu
                    645                 650                 655

    Val Glu Ser Leu Met Cys Glu Lys Arg Ile Leu Ala Ala Val Thr Ser
                660                 665                 670

    Ala Gly His Pro Phe Leu Val Asn Leu Phe Gly Cys Phe Gln Thr Pro
            675                 680                 685

    Glu His Val Cys Phe Val Met Glu Tyr Ser Ala Gly Gly Asp Leu Met
        690                 695                 700

    Leu His Ile His Ser Asp Val Phe Ser Glu Pro Arg Ala Ile Phe Tyr
    705                 710                 715                 720

    Ser Ala Cys Arg Leu Pro Pro Pro Phe Val Pro Thr Leu Ser Gly Arg
                    725                 730                 735

    Thr Asp Val Ser Asn Phe Asp Glu Glu Phe Thr Gly Glu Ala Pro Thr
```

```
                  740                     745                         750

    Leu Ser Pro Pro Arg Asp Ala Arg Pro Leu Thr Ala Ala Glu Gln Ala
            755                     760                 765

    Ala Phe Leu Asp Phe Asp Phe Val Ala Gly Gly Cys
            770                     775                 780

    <210>  145
    <211>  401
    <212>  PRT
    <213>  Homo sapiens

    <400>  145

    Met Ala Ser Asp Ala Val Gln Ser Glu Pro Arg Ser Trp Ser Leu Leu
    1               5                   10                  15

    Glu Gln Leu Gly Leu Ala Gly Ala Asp Leu Ala Ala Pro Gly Val Gln
                20                  25                  30

    Gln Gln Leu Glu Leu Glu Arg Glu Arg Leu Arg Arg Glu Ile Arg Lys
            35                  40                  45

    Glu Leu Lys Leu Lys Glu Gly Ala Glu Asn Leu Arg Arg Ala Thr Thr
        50                  55                  60

    Asp Leu Gly Arg Ser Leu Gly Pro Val Glu Leu Leu Leu Arg Gly Ser
    65                  70                  75                  80

    Ser Arg Arg Leu Asp Leu Leu His Gln Gln Leu Gln Glu Leu His Ala
                85                  90                  95

    His Val Val Leu Pro Asp Pro Ala Ala Thr His Asp Gly Pro Gln Ser
                100                 105                 110

    Pro Gly Ala Gly Gly Pro Thr Cys Ser Ala Thr Asn Leu Ser Arg Val
            115                 120                 125

    Ala Gly Leu Glu Lys Gln Leu Ala Ile Glu Leu Lys Val Lys Gln Gly
        130                 135                 140

    Ala Glu Asn Met Ile Gln Thr Tyr Ser Asn Gly Ser Thr Lys Asp Arg
    145                 150                 155                 160

    Lys Leu Leu Leu Thr Ala Gln Gln Met Leu Gln Asp Ser Lys Thr Lys
                165                 170                 175

    Ile Asp Ile Ile Arg Met Gln Leu Arg Arg Ala Leu Gln Ala Asp Gln
                180                 185                 190

    Leu Glu Asn Gln Ala Ala Pro Asp Asp Thr Gln Gly Ser Pro Asp Leu
            195                 200                 205

    Gly Ala Val Glu Leu Arg Ile Glu Glu Leu Arg His His Phe Arg Val
        210                 215                 220
```

Glu His Ala Val Ala Glu Gly Ala Lys Asn Val Leu Arg Leu Leu Ser
225   230   235   240

Ala Ala Lys Ala Pro Asp Arg Lys Ala Val Ser Glu Ala Gln Glu Lys
                245   250   255

Leu Thr Glu Ser Asn Gln Lys Leu Gly Leu Leu Arg Glu Ala Leu Glu
                260   265   270

Arg Arg Leu Gly Glu Leu Pro Ala Asp His Pro Lys Gly Arg Leu Leu
            275   280   285

Arg Glu Glu Leu Ala Ala Ala Ser Ser Ala Ala Phe Ser Thr Arg Leu
            290   295   300

Ala Gly Pro Phe Pro Ala Thr His Tyr Ser Thr Leu Cys Lys Pro Ala
305   310   315   320

Pro Leu Thr Gly Thr Leu Glu Val Arg Val Val Gly Cys Arg Asp Leu
                325   330   335

Pro Glu Thr Ile Pro Trp Asn Pro Thr Pro Ser Met Gly Gly Pro Gly
                340   345   350

Thr Pro Asp Ser Arg Pro Pro Phe Leu Ser Arg Pro Ala Arg Gly Leu
            355   360   365

Tyr Ser Arg Ser Gly Ser Leu Ser Gly Arg Ser Ser Leu Lys Ala Glu
    370   375   380

Ala Glu Asn Thr Ser Glu Val Ser Thr Val Leu Lys Leu Asp Asn Thr
385   390   395   400

His

<210> 146
<211> 96
<212> PRT
<213> Homo sapiens

<400> 146

Met Gln Ser Phe Leu Val Glu Gly Arg Phe Lys His Glu Met Phe Glu
1   5   10   15

Lys Val Phe Ala Glu Glu Arg Asn Gly Gly Gln Arg Leu Leu Cys Ala
            20   25   30

Thr Asp Val Pro Ile Arg Thr Val Ser Ser Ala Ala Ser Gln Gly Leu
            35   40   45

His Met Gln Asn Asp Asp Ala Cys Leu Gly Ala Ala Ser Pro Ser Ala
        50   55   60

Ala Ser Trp Ser Arg Arg Ser Ala Glu Ser Lys Val Ser Leu Cys Trp
65   70   75   80

```
Lys Leu Lys Trp Lys Glu Asp Leu Val Trp Phe Tyr Ser Gln Ser His
                85                  90                  95

<210>  147
<211>  333
<212>  PRT
<213>  Homo sapiens

<400>  147

Met His Arg Tyr Phe Glu Ser Pro Arg Arg Leu Leu Pro Val His Phe
1               5                   10                  15

Cys Cys Cys Gln Trp Arg Gly Gly Val Asp Phe Glu Cys Leu Leu
            20                  25                  30

Gly Gly Val Trp Asp Arg Cys Arg Lys Val Leu Arg Ala Gln Glu Cys
            35                  40                  45

Glu Trp Pro Arg His Leu Pro Ser Ala Cys Leu Leu Ser Ser Ala Cys
        50                  55                  60

Arg Gly Gln Pro Glu Arg Arg Ala Ala Val Val Gly Ala Gln Asp Pro
65                  70                  75                  80

Thr Glu Pro Pro Arg Leu Ser Arg Ser Leu Ser Gly Ala Ser Pro Phe
                85                  90                  95

Leu Gly Glu Thr Lys Gln Glu Thr Leu Thr Asn Ile Ser Ala Val Asn
            100                 105                 110

Tyr Asp Phe Asp Glu Glu Tyr Phe Ser Asn Thr Ser Glu Leu Ala Lys
        115                 120                 125

Asp Phe Ile Arg Arg Leu Leu Val Lys Asp Pro Lys Arg Arg Met Thr
        130                 135                 140

Ile Ala Gln Ser Leu Glu His Ser Trp Ile Lys Ala Ile Arg Arg Arg
145                 150                 155                 160

Asn Val Arg Gly Glu Asp Ser Gly Arg Lys Pro Glu Arg Arg Arg Leu
            165                 170                 175

Lys Thr Thr Arg Leu Lys Glu Tyr Thr Ile Lys Ser His Ser Ser Leu
            180                 185                 190

Pro Pro Asn Asn Ser Tyr Ala Asp Phe Glu Arg Phe Ser Lys Val Leu
            195                 200                 205

Glu Glu Ala Ala Ala Ala Glu Glu Gly Leu Arg Glu Leu Gln Arg Ser
        210                 215                 220

Arg Arg Leu Cys His Glu Asp Val Glu Ala Leu Ala Ala Ile Tyr Glu
225                 230                 235                 240

Glu Lys Glu Ala Trp Tyr Arg Glu Glu Ser Asp Ser Leu Gly Gln Asp
```

Leu Arg Arg Leu Arg Gln Glu Leu Leu Lys Thr Glu Ala Leu Lys Arg
         260   265   270

Gln Ala Gln Glu Glu Ala Lys Gly Ala Leu Leu Gly Thr Ser Gly Leu
         275   280   285

Lys Arg Arg Phe Ser Arg Leu Glu Asn Arg Tyr Glu Ala Leu Ala Lys
         290   295   300

Gln Val Ala Ser Glu Met Arg Phe Val Gln Asp Leu Val Arg Ala Leu
305   310   315   320

Glu Gln Glu Lys Leu Gln Gly Val Glu Cys Gly Leu Arg
                 325   330

<210> 148
<211> 131
<212> PRT
<213> Homo sapiens

<400> 148

Met Leu Lys Glu Phe Leu Glu Ile Pro Phe Pro Thr Ser Pro Glu Cys
1   5   10   15

Thr Leu Gln Pro Lys Ser Gln Gln Pro Thr Gly Lys Glu Ala Glu Glu
         20   25   30

His Pro Thr Ser Ala Pro Leu Thr His Ser Leu Leu Pro Pro Thr Pro
         35   40   45

Leu Trp Val Val Ser His Phe Ile Phe Asp Phe Arg Gly Glu Thr Ala
      50   55   60

Leu His Lys Ala Ala Cys Gln Arg Asn Arg Ala Val Cys Gln Leu Leu
65   70   75   80

Val Asp Ala Gly Ala Ser Leu Arg Lys Thr Asp Ser Lys Gly Lys Thr
               85   90   95

Pro Gln Glu Arg Ala Gln Gln Ala Gly Asp Pro Asp Leu Ala Ala Tyr
         100   105   110

Leu Glu Ser Arg Gln Asn Tyr Lys Val Ile Gly His Glu Asp Leu Glu
         115   120   125

Thr Ala Val
    130

<210> 149
<211> 272
<212> PRT
<213> Homo sapiens

<400> 149

```
Met Arg Gly Ala Ala Arg Leu Gly Arg Pro Gly Arg Ser Cys Leu Pro
1               5                   10                  15

Gly Pro Ala Leu Arg Ala Pro Pro Arg Pro Pro Leu Leu Leu Leu Leu
            20                  25                  30

Ala Leu Leu Pro Leu Leu Pro Ala Pro Gly Ala Ala Ala Ala Pro Ala
        35                  40                  45

Pro Arg Pro Pro Glu Leu Gln Ser Ala Ser Ala Gly Pro Ser Val Ser
    50                  55                  60

Leu Tyr Leu Ser Glu Asp Glu Val Arg Arg Leu Ile Gly Leu Asp Ala
65                  70                  75                  80

Glu Leu Tyr Tyr Val Arg Asn Asp Leu Ile Ser His Tyr Ala Leu Ser
                85                  90                  95

Phe Ser Leu Leu Val Pro Ser Glu Thr Asn Phe Leu His Phe Thr Trp
            100                 105                 110

His Ala Lys Ser Lys Val Glu Tyr Lys Leu Gly Phe Gln Val Asp Asn
        115                 120                 125

Val Leu Ala Met Asp Met Pro Gln Val Asn Ile Ser Val Gln Gly Glu
    130                 135                 140

Val Pro Arg Thr Leu Ser Val Phe Arg Val Glu Leu Ser Cys Thr Gly
145                 150                 155                 160

Lys Val Asp Ser Glu Val Met Ile Leu Met Gln Leu Asn Leu Thr Val
            165                 170                 175

Asn Ser Ser Lys Asn Phe Thr Val Leu Asn Phe Lys Arg Arg Lys Met
        180                 185                 190

Cys Tyr Lys Lys Leu Glu Glu Val Lys Thr Ser Ala Leu Asp Lys Asn
        195                 200                 205

Thr Ser Arg Thr Ile Tyr Asp Pro Val His Ala Ala Pro Thr Thr Ser
    210                 215                 220

Thr Arg Val Phe Tyr Ile Ser Val Gly Val Cys Cys Ala Val Ile Phe
225                 230                 235                 240

Leu Val Ala Ile Ile Leu Ala Val Leu His Leu His Ser Met Lys Arg
            245                 250                 255

Ile Glu Leu Asp Asp Arg Tyr Cys Thr Tyr Phe Gly Lys Glu Lys Lys
            260                 265                 270

<210>    150
<211>    344
<212>    PRT
<213>    Homo sapiens
```

<400> 150

```
Met Pro Gln Val Asn Ile Ser Val Gln Gly Glu Val Pro Arg Thr Leu
1               5                   10                  15

Ser Val Phe Arg Val Glu Leu Ser Cys Thr Gly Lys Val Asp Ser Glu
            20                  25                  30

Val Met Ile Leu Met Gln Leu Asn Leu Thr Val Asn Ser Ser Lys Asn
            35                  40                  45

Phe Thr Val Leu Asn Phe Lys Arg Arg Lys Met Cys Tyr Lys Lys Leu
    50                  55                  60

Glu Glu Val Lys Thr Ser Ala Leu Asp Lys Asn Thr Ser Arg Thr Ile
65                  70                  75                  80

Tyr Asp Pro Val His Ala Ala Pro Thr Thr Ser Thr Arg Val Phe Tyr
            85                      90                  95

Ile Ser Val Gly Val Cys Cys Ala Val Ile Phe Leu Val Ala Ile Ile
            100                 105                 110

Leu Ala Val Leu His Leu His Ser Met Lys Arg Ile Glu Leu Asp Asp
            115                 120                 125

Ser Ile Ser Ala Ser Ser Ser Ser Gln Gly Leu Ser Gln Pro Ser Thr
    130                 135                 140

Gln Thr Thr Gln Tyr Leu Arg Ala Asp Thr Pro Asn Asn Ala Thr Pro
145                 150                 155                 160

Ile Thr Ser Ser Tyr Tyr Pro Thr Leu Arg Ile Glu Lys Asn Asp Leu
                165                 170                 175

Arg Ser Val Thr Leu Leu Glu Ala Lys Gly Lys Val Lys Asp Ile Ala
            180                 185                 190

Ile Ser Arg Glu Arg Ile Thr Leu Lys Asp Val Leu Gln Glu Gly Thr
            195                 200                 205

Phe Gly Arg Ile Phe His Gly Ile Leu Ile Asp Glu Lys Asp Pro Asn
    210                 215                 220

Lys Glu Lys Gln Ala Phe Val Lys Thr Val Lys Asp Gln Ala Ser Glu
225                 230                 235                 240

Ile Gln Val Thr Met Met Leu Thr Glu Ser Cys Lys Leu Arg Gly Leu
            245                 250                 255

His His Arg Asn Leu Leu Pro Ile Thr His Val Cys Ile Glu Glu Gly
            260                 265                 270

Glu Lys Pro Met Val Ile Leu Pro Tyr Met Asn Trp Gly Asn Leu Lys
    275                 280                 285

Leu Phe Leu Arg Gln Cys Lys Leu Val Glu Ala Asn Asn Pro Gln Ala
```

```
                290                    295                        300
    Ile Ser Gln Gln Asp Leu Val His Met Ala Ile Gln Ile Ala Cys Gly
    305                 310                 315                 320

    Met Ser Tyr Leu Ala Arg Arg Glu Val Ile His Lys Asp Leu Ala Ala
                    325                 330                 335

    Arg Asn Cys Val Gly Pro Leu Glu
                    340
```

<210> 151
<211> 141
<212> PRT
<213> Homo sapiens

<400> 151

```
    Met Glu Ala Ile Arg Thr Asp Asn Gln Asn Phe Ala Ser Gln Leu Arg
    1               5                   10                  15

    Glu Ala Glu Ala Arg Asn Arg Asp Leu Glu Ala His Val Arg Gln Leu
                    20                  25                  30

    Gln Glu Arg Met Glu Leu Leu Gln Ala Glu Gly Ala Thr Ala Val Thr
                35                  40                  45

    Gly Val Pro Ser Pro Arg Ala Thr Asp Pro Pro Ser His Leu Asp Gly
        50                  55                  60

    Pro Pro Ala Val Ala Val Gly Gln Cys Pro Leu Val Gly Pro Gly Pro
    65                  70                  75                  80

    Met His Arg Arg His Leu Leu Leu Pro Ala Arg Val Pro Arg Pro Gly
                    85                  90                  95

    Leu Ser Glu Ala Leu Ser Leu Leu Leu Phe Ala Val Val Leu Ser Arg
                100                 105                 110

    Ala Ala Ala Leu Gly Cys Ile Gly Leu Val Ala His Ala Gly Gln Leu
            115                 120                 125

    Thr Ala Val Trp Arg Arg Pro Gly Ala Ala Arg Ala Pro
        130                 135                 140
```

<210> 152
<211> 106
<212> PRT
<213> Homo sapiens

<400> 152

```
    Met Glu Leu Leu Gln Ala Glu Gly Ala Thr Ala Val Thr Gly Val Pro
    1               5                   10                  15

    Ser Pro Arg Ala Thr Asp Pro Pro Ser His Leu Asp Gly Pro Pro Ala
                    20                  25                  30
```

```
Val Ala Val Gly Gln Cys Pro Leu Val Gly Pro Gly Pro Met His Arg
        35                  40                  45

Arg His Leu Leu Leu Pro Ala Arg Val Pro Arg Pro Gly Leu Ser Glu
        50                  55                  60

Ala Leu Ser Leu Leu Leu Phe Ala Val Val Leu Ser Arg Ala Ala Ala
65                  70                  75                  80

Leu Gly Cys Ile Gly Leu Val Ala His Ala Gly Gln Leu Thr Ala Val
                85                  90                  95

Trp Arg Arg Pro Gly Ala Ala Arg Ala Pro
            100                 105


<210>   153
<211>   50
<212>   PRT
<213>   Homo sapiens

<400>   153

Met Val Asn Leu Ser His Glu Asp Phe Glu Phe Ile Ser Gly Thr Arg
1               5                   10                  15

Met Arg Lys Leu Ala Arg Glu Gly Gln Lys Pro Pro Glu Gly Phe Met
            20                  25                  30

Ala Pro Lys Ala Trp Thr Val Leu Thr Glu Tyr Tyr Lys Ser Leu Glu
            35                  40                  45

Lys Ala
        50

<210>   154
<211>   238
<212>   PRT
<213>   Homo sapiens

<400>   154

Met Ala Arg Thr Thr Ser Gln Leu Tyr Asp Ala Val Pro Ile Gln Ser
1               5                   10                  15

Ser Val Val Leu Cys Ser Cys Pro Ser Pro Ser Met Val Arg Thr Gln
            20                  25                  30

Thr Glu Ser Ser Thr Pro Pro Gly Ile Pro Gly Gly Ser Arg Gln Gly
            35                  40                  45

Pro Ala Met Asp Gly Thr Ala Ala Glu Pro Arg Pro Gly Ala Gly Ser
        50                  55                  60

Leu Gln His Ala Gln Pro Pro Pro Gln Pro Arg Lys Lys Arg Pro Glu
65                  70                  75                  80
```

```
Asp Phe Lys Phe Gly Lys Ile Leu Gly Glu Gly Ser Phe Ser Thr Val
                85                  90              95

Val Leu Ala Arg Glu Leu Ala Thr Ser Arg Glu Tyr Ala Ile Lys Ile
            100             105             110

Leu Glu Lys Arg His Ile Ile Lys Glu Asn Lys Val Pro Tyr Val Thr
            115             120             125

Arg Glu Arg Asp Val Met Ser Arg Leu Asp His Pro Phe Phe Val Lys
    130             135             140

Leu Tyr Phe Thr Phe Gln Asp Asp Glu Lys Leu Tyr Phe Gly Leu Ser
145             150             155             160

Tyr Ala Lys Asn Gly Glu Leu Leu Lys Tyr Ile Arg Lys Ile Gly Ser
            165             170             175

Phe Asp Glu Thr Cys Thr Arg Phe Tyr Thr Ala Glu Ile Val Ser Ala
            180             185             190

Leu Glu Tyr Leu His Gly Lys Gly Ile Ile His Arg Asp Leu Lys Pro
            195             200             205

Glu Asn Ile Leu Leu Asn Glu Asp Met His Ile Gln Ile Thr Asp Phe
    210             215             220

Gly Thr Ala Lys Val Leu Ser Pro Glu Ser Lys Gln Val Cys
225             230             235
```

<210> 155
<211> 73
<212> PRT
<213> Homo sapiens

<400> 155

```
Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
1               5               10              15

Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp
            20              25              30

Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro
            35              40              45

Tyr Pro Leu Asn Asn Phe Ser Val Ala Ser Ser Val Met Phe Arg Tyr
    50              55              60

Leu Gln Asn Leu Thr Leu Asn Gln Val
65              70
```

<210> 156
<211> 213
<212> PRT
<213> Homo sapiens

<400> 156

Met Ser Asp Val Thr Ile Val Lys Glu Gly Trp Val Gln Lys Arg Gly
1   5   10   15

Glu Tyr Ile Lys Asn Trp Arg Pro Arg Tyr Phe Leu Leu Lys Thr Asp
            20   25   30

Gly Ser Phe Ile Gly Tyr Lys Glu Lys Pro Gln Asp Val Asp Leu Pro
        35   40   45

Tyr Pro Leu Asn Asn Phe Ser Val Ala Lys Cys Gln Leu Met Lys Thr
    50   55   60

Glu Arg Pro Lys Pro Asn Thr Phe Ile Ile Arg Cys Leu Gln Trp Thr
65   70   75   80

Thr Val Ile Glu Arg Thr Phe His Val Asp Thr Pro Glu Glu Arg Glu
            85   90   95

Glu Trp Thr Glu Ala Ile Gln Ala Val Ala Asp Arg Leu Gln Arg Gln
            100   105   110

Glu Glu Glu Arg Met Asn Cys Ser Pro Thr Ser Gln Ile Asp Asn Ile
        115   120   125

Gly Glu Glu Glu Met Asp Ala Ser Thr Thr His His Lys Arg Lys Thr
    130   135   140

Met Asn Asp Phe Asp Tyr Leu Lys Leu Leu Gly Lys Gly Thr Phe Gly
145   150   155   160

Lys Val Ile Leu Val Arg Glu Lys Ala Ser Gly Lys Tyr Tyr Ala Met
            165   170   175

Lys Ile Leu Lys Lys Glu Val Ile Ile Ala Lys Val Thr Asp Leu Leu
            180   185   190

Lys Leu Ile Thr Lys Phe Leu Phe Ala Val Cys Met Cys Leu Trp Ala
        195   200   205

His Glu Phe Thr Cys
    210

<210> 157
<211> 352
<212> PRT
<213> Homo sapiens

<400> 157

Met Gly Gly Lys Pro Ala Asn Arg Met Met Pro Tyr Pro Phe Pro Ser
1   5   10   15

Gly Thr Trp Lys Val Lys Trp Val Ala Ser Arg Asn Ala Phe Lys Pro
            20   25   30

Arg Ile Gly Ile Leu Ile Lys Thr Leu Ile Tyr Ser Ser Gln Phe Pro
        35   40   45

Leu Gly Asn Leu Glu Lys Ile Ser Gln Leu Leu Ser Lys Ser Ala Gln
        50   55   60

Cys Pro Leu Arg Val His Tyr Leu Ser Ser Gln Tyr Gly Asp Glu Arg
65   70   75   80

Cys Phe Met Phe Val Leu Ile Ser Pro Thr Lys Ser Val Ile Ile Thr
                85   90   95

Ile Leu Ser Leu Leu Phe Thr Leu Gln Leu Phe Phe His Leu Ser Arg
                100   105   110

Glu Arg Val Phe Ser Glu Asp Arg Thr Arg Phe Tyr Gly Ala Glu Ile
        115   120   125

Val Ser Ala Leu Asp Tyr Leu His Ser Gly Lys Ile Val Tyr Arg Asp
        130   135   140

Leu Lys Leu Glu Asn Leu Met Leu Asp Lys Asp Gly His Ile Lys Ile
145   150   155   160

Thr Asp Phe Gly Leu Cys Lys Glu Gly Ile Thr Asp Ala Ala Thr Met
                165   170   175

Lys Thr Phe Cys Gly Thr Pro Glu Tyr Leu Ala Pro Glu Val Leu Glu
                180   185   190

Asp Asn Asp Tyr Gly Arg Ala Val Asp Trp Trp Gly Leu Gly Val Val
        195   200   205

Met Tyr Glu Met Met Cys Gly Arg Leu Pro Phe Tyr Asn Gln Asp His
        210   215   220

Glu Lys Leu Phe Glu Leu Ile Leu Met Glu Asp Ile Lys Phe Pro Arg
225   230   235   240

Thr Leu Ser Ser Asp Ala Lys Ser Leu Leu Ser Gly Leu Leu Ile Lys
                245   250   255

Asp Pro Asn Lys Arg Leu Gly Gly Gly Pro Asp Asp Ala Lys Glu Ile
        260   265   270

Met Arg His Ser Phe Phe Ser Gly Val Asn Trp Gln Asp Val Tyr Asp
        275   280   285

Lys Lys Leu Val Pro Pro Phe Lys Pro Gln Val Thr Ser Glu Thr Asp
        290   295   300

Thr Arg Tyr Phe Asp Glu Glu Phe Thr Ala Gln Thr Ile Thr Ile Thr
305   310   315   320

Pro Pro Glu Lys Tyr Asp Glu Asp Gly Met Asp Cys Met Asp Asn Glu
                325   330   335

```
Arg Arg Pro His Phe Pro Gln Phe Ser Tyr Ser Ala Ser Gly Arg Glu
            340             345             350

<210>  158
<211>  132
<212>  PRT
<213>  Homo sapiens

<400>  158

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1                 5                 10                15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys
            20              25              30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
            35              40              45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His
            50              55              60

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys
65                70                75                80

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys
                85              90              95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile
            100             105             110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Val Cys
            115             120             125

Met Thr Leu Glu
        130

<210>  159
<211>  192
<212>  PRT
<213>  Homo sapiens

<400>  159

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1                 5                 10                15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys
            20              25              30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
            35              40              45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His Ser His
            50              55              60

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys
```

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys
                85   90   95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile
            100   105   110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp
        115   120   125

Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln
    130   135   140

Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu
145   150   155   160

Tyr Cys Ser Arg Arg Val Ser Val Asn Ser Tyr Leu Arg Thr Phe Ala
            165   170   175

Tyr Pro Glu Leu Thr Trp Tyr Ser Lys Ser Ile Leu Ser Gly Ile Thr
            180   185   190

<210>   160
<211>   207
<212>   PRT
<213>   Homo sapiens

<400>   160

Met Glu Leu Leu Arg Thr Ile Thr Tyr Gln Pro Ala Ala Ser Thr Lys
1   5   10   15

Met Cys Glu Gln Ala Leu Gly Lys Gly Cys Gly Gly Asn Ser Lys Lys
            20   25   30

Lys Arg Pro Pro Gln Pro Pro Glu Glu Ser Gln Pro Pro Gln Ser Gln
        35   40   45

Ala Gln Val Pro Pro Ala Ala Pro His His His His His His Ser His
    50   55   60

Ser Gly Pro Glu Ile Ser Arg Ile Ile Val Asp Pro Thr Thr Gly Lys
65   70   75   80

Arg Tyr Cys Arg Gly Lys Val Leu Gly Lys Gly Gly Phe Ala Lys Cys
                85   90   95

Tyr Glu Met Thr Asp Leu Thr Asn Asn Lys Val Tyr Ala Ala Lys Ile
            100   105   110

Ile Pro His Ser Arg Val Ala Lys Pro His Gln Arg Glu Lys Ile Asp
        115   120   125

Lys Glu Ile Glu Leu His Arg Ile Leu His His Lys His Val Val Gln
    130   135   140

Phe Tyr His Tyr Phe Glu Asp Lys Glu Asn Ile Tyr Ile Leu Leu Glu
145   150   155   160

Tyr Cys Ser Arg Arg Leu Gln Gly Ser Gln Lys Asn Asp Leu Glu Tyr
                165   170   175

Val Glu Glu Asp Gly His Val Val Val Arg Lys Gln Phe Pro Cys Gly
            180   185   190

Leu Leu Asp Trp Val Glu Pro Glu Gln Ala Lys Ala Tyr Ser Ser
        195   200   205

<210>   161
<211>   337
<212>   PRT
<213>   Homo sapiens

<400>   161

Met Ser Asp Lys Asp Leu Arg Thr Ala Ala Ala Gly Gly Gly His Leu
1   5   10   15

Val Ala Ile Leu Thr Val Phe Ile Pro Gln Lys Asp Leu Val Glu Glu
            20   25   30

Glu Ala Glu Glu Ala Gly Val Ala Leu Arg Ser Thr Gln Ser Thr Leu
        35   40   45

Gln Ala Gly Leu Ala Ala Asp Ala Trp Ala Ala Pro Ile Ala Met Gln
    50   55   60

Ile Tyr Lys Lys His Leu Asp Pro Arg Pro Gly Pro Cys His Leu Ser
65   70   75   80

Trp Ala Trp Ala Trp Ala Ser Trp Pro Ala Ala Ala Cys Thr Ala Gly
                85   90   95

Pro Lys Gly Arg Pro Pro Met Thr Gln Val Tyr Glu Arg Leu Glu Lys
                100   105   110

Leu Gln Ala Val Val Ala Gly Val Pro Gly His Leu Glu Ala Ala Ser
        115   120   125

Cys Ile Pro Phe Pro Gln Glu Asn Ser Tyr Val Ser Ser Thr Gly Arg
    130   135   140

Ala Ser Ala Gln Ala Ala Glu Gln Leu Gln Arg Gly Pro Asn Gln Pro
145   150   155   160

Val Glu Ser Asp Glu Ser Leu Gly Gly Leu Ser Ala Ala Leu Arg Ser
            165   170   175

Trp His Leu Thr Pro Ser Cys Pro Leu Asp Pro Ala Pro Leu Arg Glu
            180   185   190

Ala Gly Cys Pro Gln Gly Asp Thr Ala Gly Glu Ser Ser Trp Gly Ser
        195   200   205

```
Gly Pro Gly Ser Arg Pro Thr Ala Val Glu Gly Leu Ala Leu Gly Ser
    210                 215             220

Ser Ala Ser Ser Ser Ser Glu Pro Pro Gln Ile Ile Ile Asn Pro Ala
225                 230             235                 240

Arg Gln Lys Met Val Gln Lys Leu Ala Leu Tyr Glu Asp Gly Ala Leu
            245             250             255

Asp Ser Leu Gln Leu Leu Ser Ser Ser Ser Leu Pro Gly Leu Gly Leu
            260             265             270

Glu Gln Asp Arg Gln Gly Pro Lys Lys Val Met Asn Phe Arg Ala Asp
        275             280             285

Val Phe Thr Trp Ala Asp Pro Pro Asn Pro Glu Val Lys Val Leu Met
    290             295             300

Val Arg Ser Ser His Gly Ala Arg Val Leu Ser Thr Leu Pro Ala Val
305             310             315             320

Gly Val Gly Ala His Ala Arg Trp Gly Glu Lys Glu Val Ala Leu Leu
            325             330             335

Phe


<210>   162
<211>   122
<212>   PRT
<213>   Homo sapiens

<400>   162

Met Gly His Ala Leu Cys Val Cys Ser Arg Gly Thr Val Ile Ile Asp
1               5               10              15

Asn Lys Arg Tyr Leu Phe Ile Gln Lys Leu Gly Glu Gly Gly Phe Ser
            20              25              30

Tyr Val Asp Leu Val Glu Gly Leu His Asp Gly His Phe Tyr Ala Leu
            35              40              45

Lys Arg Ile Leu Cys His Glu Gln Gln Asp Arg Glu Glu Ala Gln Arg
    50              55              60

Glu Ala Asp Met His Arg Leu Phe Asn His Pro Asn Ile Leu Arg Leu
65              70              75              80

Val Ala Tyr Cys Leu Arg Glu Arg Gly Ala Lys His Glu Ala Trp Leu
            85              90              95

Leu Leu Pro Phe Phe Lys Val Arg Lys Thr Pro Val Tyr Gly Gly Gly
            100             105             110

Cys Ser Arg Ala Thr Tyr Ser Arg Ala Val
```

<210> 163
<211> 842
<212> PRT
<213> Homo sapiens

<400> 163

Met Glu Arg Ala Ile Ser Pro Gly Leu Leu Val Arg Ala Leu Leu Leu
1   5   10   15

Leu Leu Leu Leu Gly Leu Ala Ala Arg Thr Val Ala Ala Gly Arg Ala
            20   25   30

Arg Gly Leu Pro Ala Pro Thr Ala Glu Ala Ala Phe Gly Leu Gly Ala
            35   40   45

Ala Ala Ala Pro Thr Ser Ala Thr Arg Val Pro Ala Ala Gly Ala Val
        50   55   60

Ala Ala Ala Glu Val Thr Val Glu Asp Ala Glu Ala Leu Pro Ala Ala
65   70   75   80

Ala Gly Glu Gln Glu Pro Arg Gly Pro Glu Pro Asp Asp Glu Thr Glu
                85   90   95

Leu Arg Pro Arg Gly Arg Ser Leu Val Ile Ile Ser Thr Leu Asp Gly
            100   105   110

Arg Ile Ala Ala Leu Asp Pro Glu Asn His Gly Lys Lys Gln Trp Asp
            115   120   125

Leu Asp Val Gly Ser Gly Ser Leu Val Ser Ser Ser Leu Ser Lys Pro
        130   135   140

Glu Val Phe Gly Asn Lys Met Ile Ile Pro Ser Leu Asp Gly Ala Leu
145   150   155   160

Phe Gln Trp Asp Arg Asp Arg Glu Ser Met Glu Thr Val Pro Phe Thr
                165   170   175

Val Glu Ser Leu Leu Glu Ser Ser Tyr Lys Phe Gly Asp Asp Val Val
            180   185   190

Leu Val Gly Gly Lys Ser Leu Thr Thr Tyr Gly Leu Ser Ala Tyr Ser
            195   200   205

Gly Lys Val Arg Tyr Ile Cys Ser Ala Leu Gly Cys Arg Gln Trp Asp
    210   215   220

Ser Asp Glu Met Glu Gln Glu Glu Asp Ile Leu Leu Leu Gln Arg Thr
225   230   235   240

Gln Lys Thr Val Arg Ala Val Gly Pro Arg Ser Gly Asn Glu Lys Trp
                245   250   255

Asn Phe Ser Val Gly His Phe Glu Leu Arg Tyr Ile Pro Asp Met Glu
        260   265   270

Thr Arg Ala Gly Phe Ile Glu Ser Thr Phe Lys Pro Asn Glu Asn Thr
        275   280   285

Glu Glu Ser Lys Ile Ile Ser Asp Val Glu Glu Gln Glu Ala Ala Ile
        290   295   300

Met Asp Ile Val Ile Lys Val Ser Val Ala Asp Trp Lys Val Met Ala
305   310   315   320

Phe Ser Lys Lys Gly Gly His Leu Glu Trp Glu Tyr Gln Phe Cys Thr
            325   330   335

Pro Ile Ala Ser Ala Trp Leu Leu Lys Asp Gly Lys Val Ile Pro Ile
        340   345   350

Ser Leu Phe Asp Asp Thr Ser Tyr Thr Ser Asn Asp Asp Val Leu Glu
        355   360   365

Asp Glu Glu Asp Ile Val Glu Ala Ala Arg Gly Ala Thr Glu Asn Ser
        370   375   380

Val Tyr Leu Gly Met Tyr Arg Gly Gln Leu Tyr Leu Gln Ser Ser Val
385   390   395   400

Arg Ile Ser Glu Lys Phe Pro Ser Ser Pro Lys Ala Leu Glu Ser Val
            405   410   415

Thr Asn Glu Asn Ala Ile Ile Pro Leu Pro Thr Ile Lys Trp Lys Pro
            420   425   430

Leu Ile His Ser Pro Ser Arg Thr Pro Val Leu Val Gly Ser Asp Glu
        435   440   445

Phe Asp Lys Cys Leu Ser Asn Asp Lys Phe Ser His Glu Glu Tyr Ser
        450   455   460

Asn Gly Ala Leu Ser Ile Leu Gln Tyr Pro Tyr Asp Asn Gly Tyr Tyr
465   470   475   480

Leu Pro Tyr Tyr Lys Arg Glu Arg Asn Lys Arg Ser Thr Gln Ile Thr
            485   490   495

Val Arg Phe Leu Asp Asn Pro His Tyr Asn Lys Asn Ile Arg Lys Lys
            500   505   510

Asp Pro Val Leu Leu Leu His Trp Trp Lys Glu Ile Val Ala Thr Ile
        515   520   525

Leu Phe Cys Ile Ile Ala Thr Thr Phe Ile Val Arg Arg Leu Phe His
        530   535   540

Pro His Pro His Arg Gln Arg Lys Glu Ser Glu Thr Gln Cys Gln Thr
545   550   555   560

```
Glu Asn Lys Tyr Asp Ser Val Ser Gly Glu Ala Asn Asp Ser Ser Trp
            565                 570                 575

Asn Asp Ile Lys Asn Ser Gly Tyr Ile Ser Arg Tyr Leu Thr Asp Phe
            580                 585                 590

Glu Pro Ile Gln Cys Leu Gly Arg Gly Gly Phe Gly Val Val Phe Glu
            595                 600                 605

Ala Lys Asn Lys Val Asp Asp Cys Asn Tyr Ala Ile Lys Arg Ile Arg
        610                 615                 620

Leu Pro Asn Arg Glu Leu Ala Arg Glu Lys Val Met Arg Glu Val Lys
    625                 630                 635                 640

Ala Leu Ala Lys Leu Glu His Pro Gly Ile Val Arg Tyr Phe Asn Ala
                645                 650                 655

Trp Leu Glu Ala Pro Pro Glu Lys Trp Gln Glu Lys Met Asp Glu Ile
            660                 665                 670

Trp Leu Lys Asp Glu Ser Thr Asp Trp Pro Leu Ser Ser Pro Ser Pro
            675                 680                 685

Met Asp Ala Pro Ser Val Lys Ile Arg Arg Met Asp Pro Phe Ser Thr
    690                 695                 700

Lys Glu His Ile Glu Ile Ile Ala Pro Ser Pro Gln Arg Ser Arg Ser
705                 710                 715                 720

Phe Ser Val Gly Ile Ser Cys Asp Gln Thr Ser Ser Ser Glu Ser Gln
                725                 730                 735

Phe Ser Pro Leu Glu Phe Ser Gly Met Asp His Glu Asp Ile Ser Glu
                740                 745                 750

Ser Val Asp Ala Ala Tyr Asn Leu Gln Asp Ser Cys Leu Thr Asp Cys
            755                 760                 765

Asp Val Glu Asp Gly Thr Met Asp Gly Asn Asp Glu Gly His Ser Phe
    770                 775                 780

Glu Leu Cys Pro Ser Glu Ala Ser Pro Tyr Val Arg Ser Arg Glu Arg
785                 790                 795                 800

Thr Ser Ser Ser Ile Val Phe Glu Asp Ser Gly Cys Asp Asn Ala Ser
                805                 810                 815

Ser Lys Glu Glu Pro Lys Thr Asn Arg Leu His Ile Gly Asn His Cys
        820                 825                 830

Ala Asn Lys Leu Thr Val Thr Val Leu Phe
        835                 840

<210>   164
<211>   743
<212>   PRT
```

<213> Homo sapiens

<400> 164

Met Gly Ser Arg Ala Gln Lys Ser Ala Gly Asn Ala Glu Leu Trp Glu
1   5   10   15

Pro Leu Pro Glu Gly Arg Pro Arg Pro Ala Gly Thr Ser Ser Ala Val
                20   25   30

Ser Ala Trp Ala Ser Leu Lys Leu Cys Leu Arg Gly Gly Ser Gly Arg
            35   40   45

Arg Gln Arg Leu Gly Gly Gly Arg Met Gln Pro Glu Glu Gly His Arg
        50   55   60

Leu Ala Ala Gly Ala Ala Val Arg Gly Ala Ala Ala Thr Val Leu Leu
65   70   75   80

Arg Leu Arg Asp Asp Leu Asn Val Thr Arg Leu Ser His Phe Glu Tyr
                85   90   95

Val Lys Asn Glu Asp Leu Glu Lys Ile Gly Met Gly Arg Pro Gly Gln
                100   105   110

Arg Arg Leu Trp Glu Ala Val Lys Arg Arg Lys Ala Leu Cys Lys Arg
        115   120   125

Lys Ser Trp Met Asn Lys Val Phe Ser Gly Lys Arg Leu Glu Ala Glu
        130   135   140

Phe Pro Pro His His Ser Gln Ser Thr Phe Arg Lys Thr Ser Pro Ala
145   150   155   160

Pro Gly Gly Pro Ala Gly Glu Gly Pro Leu Gln Ser Leu Thr Cys Leu
                165   170   175

Ile Gly Glu Lys Asp Leu Arg Leu Leu Glu Lys Leu Gly Asp Gly Ser
                180   185   190

Phe Gly Val Val Arg Arg Gly Glu Trp Asp Ala Pro Ser Gly Lys Thr
        195   200   205

Val Ser Pro Pro Gln Pro Ala Phe Phe Thr Gln Lys Pro Thr Tyr Asp
        210   215   220

Pro Val Ser Glu Asp Gln Asp Pro Leu Ser Ser Asp Phe Lys Arg Leu
225   230   235   240

Gly Leu Arg Lys Pro Gly Leu Pro Arg Gly Leu Trp Leu Ala Lys Pro
                245   250   255

Ser Ala Arg Val Pro Gly Thr Lys Ala Ser Arg Gly Ser Gly Ala Glu
            260   265   270

Val Thr Leu Ile Asp Phe Gly Glu Glu Pro Val Val Pro Ala Leu Arg
        275   280   285

```
Pro Cys Ala Pro Ser Leu Ala Gln Leu Ala Met Asp Ala Cys Ser Leu
    290                 295             300

Leu Asp Glu Thr Pro Pro Gln Ser Pro Thr Arg Ala Leu Pro Arg Pro
305             310             315                 320

Leu His Pro Thr Pro Val Val Asp Trp Asp Ala Arg Pro Leu Pro Pro
                325             330                 335

Pro Pro Ala Tyr Asp Asp Val Ala Gln Asp Glu Asp Asp Phe Glu Ile
            340             345             350

Cys Ser Ile Asn Ser Thr Leu Val Gly Ala Gly Val Pro Ala Gly Pro
        355             360             365

Ser Gln Gly Gln Thr Asn Tyr Ala Phe Val Pro Glu Gln Ala Arg Pro
    370             375             380

Pro Pro Pro Leu Glu Asp Asn Leu Phe Leu Pro Pro Gln Gly Gly Gly
385             390             395                 400

Lys Pro Pro Ser Ser Ala Gln Thr Ala Glu Ile Phe Gln Ala Leu Gln
            405             410             415

Gln Glu Cys Met Arg Gln Leu Gln Ala Pro Ala Gly Ser Pro Ala Pro
        420             425             430

Ser Pro Ser Pro Gly Gly Asp Asp Lys Pro Gln Val Pro Pro Arg Val
        435             440             445

Pro Ile Pro Pro Arg Pro Thr Arg Pro His Val Gln Leu Ser Pro Ala
    450             455             460

Pro Pro Gly Glu Glu Glu Thr Ser Gln Trp Pro Gly Pro Ala Ser Pro
465             470             475             480

Pro Arg Val Pro Pro Arg Glu Pro Leu Ser Pro Gln Gly Ser Arg Thr
            485             490             495

Pro Ser Pro Leu Val Pro Pro Gly Ser Ser Pro Leu Pro Pro Arg Leu
        500             505             510

Ser Ser Ser Pro Gly Lys Thr Met Pro Thr Thr Gln Ser Phe Ala Ser
        515             520             525

Asp Pro Lys Tyr Ala Thr Pro Gln Val Ile Gln Ala Pro Gly Pro Arg
    530             535             540

Ala Gly Pro Cys Ile Leu Pro Ile Val Arg Asp Gly Lys Lys Val Ser
545             550             555             560

Ser Thr His Tyr Tyr Leu Leu Pro Glu Arg Pro Ser Tyr Leu Glu Arg
            565             570             575

Tyr Gln Arg Phe Leu Arg Glu Ala Gln Ser Pro Glu Glu Pro Thr Pro
        580             585             590
```

Leu Pro Val Pro Leu Leu Leu Pro Pro Pro Ser Thr Pro Ala Pro Ala
        595   600   605

Ala Pro Thr Ala Thr Val Arg Pro Met Pro Gln Ala Ala Leu Asp Pro
        610   615   620

Lys Ala Asn Phe Ser Thr Asn Asn Ser Asn Pro Gly Ala Arg Pro Pro
625   630   635   640

Pro Pro Arg Ala Thr Ala Arg Leu Pro Gln Arg Gly Cys Pro Gly Asp
            645   650   655

Gly Pro Glu Ala Gly Arg Pro Ala Asp Lys Ile Gln Met Ala Met Val
        660   665   670

His Gly Val Thr Thr Glu Glu Cys Gln Ala Ala Leu Gln Cys His Gly
        675   680   685

Trp Ser Val Gln Arg Ala Cys Pro Val Ser Glu Gly Gly Ala Ala Leu
        690   695   700

Arg Ala Gly Ser Ala Ala Gln Arg Glu Cys His Lys Val Leu Glu Met
705   710   715   720

Phe Asp Trp Asn Leu Glu Gln Ala Gly Cys His Leu Leu Gly Ser Trp
            725   730   735

Gly Pro Ala His His Lys Arg
        740

<210> 165
<211> 604
<212> PRT
<213> Homo sapiens

<400> 165

Met Ala Ser Asn Pro Glu Arg Gly Glu Ile Leu Leu Thr Glu Leu Gln
1   5   10   15

Gly Asp Ser Arg Ser Leu Pro Phe Ser Glu Asn Val Ser Ala Val Gln
        20   25   30

Lys Leu Asp Phe Ser Asp Thr Met Val Gln Gln Lys Leu Asp Asp Ile
        35   40   45

Lys Asp Arg Ile Lys Arg Glu Ile Arg Lys Glu Leu Lys Ile Lys Glu
        50   55   60

Gly Ala Glu Asn Leu Arg Lys Val Thr Thr Asp Lys Lys Ser Leu Ala
65   70   75   80

Tyr Val Asp Asn Ile Leu Lys Lys Ser Asn Lys Lys Leu Glu Glu Leu
            85   90   95

His His Lys Leu Gln Glu Leu Asn Ala His Ile Val Val Ser Asp Pro

```
                 100                      105                      110

     Glu Asp Ile Thr Asp Cys Pro Arg Thr Pro Asp Thr Pro Asn Asn Asp
             115                 120                 125

     Pro Arg Cys Ser Thr Ser Asn Asn Arg Leu Lys Ala Leu Gln Lys Gln
             130                 135                 140

     Leu Asp Ile Glu Leu Lys Val Lys Gln Gly Ala Glu Asn Met Ile Gln
     145                 150                 155                 160

     Met Tyr Ser Asn Gly Ser Ser Lys Asp Arg Lys Leu His Gly Thr Ala
                 165                 170                 175

     Gln Gln Leu Leu Gln Asp Ser Lys Thr Lys Ile Glu Val Ile Arg Met
                 180                 185                 190

     Gln Ile Leu Gln Ala Val Gln Thr Asn Glu Leu Ala Phe Asp Asn Ala
                 195                 200                 205

     Lys Pro Val Ile Ser Pro Leu Glu Leu Arg Met Glu Glu Leu Arg His
             210                 215                 220

     His Phe Arg Ile Glu Phe Ala Val Ala Glu Gly Ala Lys Asn Val Met
     225                 230                 235                 240

     Lys Leu Leu Gly Ser Gly Lys Val Thr Asp Arg Lys Ala Leu Ser Glu
                 245                 250                 255

     Ala Gln Ala Arg Phe Asn Glu Ser Ser Gln Lys Leu Asp Leu Leu Lys
                 260                 265                 270

     Tyr Ser Leu Glu Gln Arg Leu Asn Glu Val Pro Lys Asn His Pro Lys
                 275                 280                 285

     Ser Arg Ile Ile Ile Glu Glu Leu Ser Leu Val Ala Ala Ser Pro Thr
             290                 295                 300

     Leu Ser Pro Arg Gln Ser Met Ile Ser Thr Gln Asn Gln Tyr Ser Thr
     305                 310                 315                 320

     Leu Ser Lys Pro Ala Ala Leu Thr Gly Thr Leu Glu Val Arg Leu Met
                 325                 330                 335

     Gly Cys Gln Asp Ile Leu Glu Asn Val Pro Gly Arg Ser Lys Ala Thr
                 340                 345                 350

     Ser Val Ala Leu Pro Gly Trp Ser Pro Ser Glu Thr Arg Ser Ser Phe
                 355                 360                 365

     Met Ser Arg Thr Ser Lys Ser Lys Ser Gly Ser Ser Arg Asn Leu Leu
             370                 375                 380

     Lys Thr Asp Asp Leu Ser Asn Asp Val Cys Ala Val Leu Lys Leu Asp
     385                 390                 395                 400

     Asn Thr Val Val Gly Gln Thr Ser Trp Lys Pro Ile Ser Asn Gln Ser
```

Trp Asp Gln Lys Phe Thr Leu Glu Leu Asp Arg Ser Arg Glu Leu Glu
            420   425   430

Ile Ser Val Tyr Trp Arg Asp Trp Arg Ser Leu Cys Ala Val Lys Phe
            435   440   445

Leu Arg Leu Glu Asp Phe Leu Asp Asn Gln Arg His Gly Met Cys Leu
        450   455   460

Tyr Leu Glu Pro Gln Gly Thr Leu Phe Ala Glu Val Thr Phe Phe Asn
465   470   475   480

Pro Val Ile Glu Arg Arg Pro Lys Leu Gln Arg Gln Lys Lys Ile Phe
                485   490   495

Ser Lys Gln Gln Gly Lys Thr Phe Leu Arg Ala Pro Gln Met Asn Ile
            500   505   510

Asn Ile Ala Thr Trp Gly Arg Leu Val Arg Arg Ala Ile Pro Thr Val
            515   520   525

Asn His Ser Gly Thr Phe Ser Pro Gln Ala Pro Val Pro Thr Thr Val
        530   535   540

Pro Val Val Asp Val Arg Ile Pro Gln Leu Ala Pro Pro Ala Arg Tyr
545   550   555   560

Val Ser Glu Ile Leu Ser Ile Ser Tyr Thr Lys Leu Leu Gly His Ser
            565   570   575

Tyr Val Leu Ile Ile Ala Gly Val Leu Ser Leu Ala Phe Phe Pro Ser
            580   585   590

Ser Ile Leu Lys Val Val Phe Cys Leu Leu Lys Lys
        595   600

<210>   166
<211>   613
<212>   PRT
<213>   Homo sapiens

<400>   166

Met Ala Ser Asn Pro Glu Arg Gly Glu Ile Leu Leu Thr Glu Leu Gln
1   5   10   15

Gly Asp Ser Arg Ser Leu Pro Phe Ser Glu Asn Val Ser Ala Val Gln
            20   25   30

Lys Leu Asp Phe Ser Asp Thr Met Val Gln Gln Lys Leu Asp Asp Ile
        35   40   45

Lys Asp Arg Ile Lys Arg Glu Ile Arg Lys Glu Leu Lys Ile Lys Glu
        50   55   60

Gly Ala Glu Asn Leu Arg Lys Val Thr Thr Asp Lys Lys Ser Leu Ala
65   70   75   80

Tyr Val Asp Asn Ile Leu Lys Lys Ser Asn Lys Lys Leu Glu Glu Leu
                85   90   95

His His Lys Leu Gln Glu Leu Asn Ala His Ile Val Val Ser Asp Pro
            100   105   110

Glu Asp Ile Thr Asp Cys Pro Arg Thr Pro Asp Thr Pro Asn Asn Asp
        115   120   125

Pro Arg Cys Ser Thr Ser Asn Asn Arg Leu Lys Ala Leu Gln Lys Gln
    130   135   140

Leu Asp Ile Glu Leu Lys Val Lys Gln Gly Ala Glu Asn Met Ile Gln
145   150   155   160

Met Tyr Ser Asn Gly Ser Ser Lys Asp Arg Lys Leu His Gly Thr Ala
                165   170   175

Gln Gln Leu Leu Gln Asp Ser Lys Thr Lys Ile Glu Val Ile Arg Met
            180   185   190

Gln Ile Leu Gln Ala Val Gln Thr Asn Glu Leu Ala Phe Asp Asn Ala
            195   200   205

Lys Pro Val Ile Ser Pro Leu Glu Leu Arg Met Glu Glu Leu Arg His
    210   215   220

His Phe Arg Ile Glu Phe Ala Val Ala Glu Gly Ala Lys Asn Val Met
225   230   235   240

Lys Leu Leu Gly Ser Gly Lys Val Thr Asp Arg Lys Ala Leu Ser Glu
                245   250   255

Ala Gln Ala Arg Phe Asn Glu Ser Ser Gln Lys Leu Asp Leu Leu Lys
            260   265   270

Tyr Ser Leu Glu Gln Arg Leu Asn Glu Val Pro Lys Asn His Pro Lys
    275   280   285

Ser Arg Ile Ile Ile Glu Glu Leu Ser Leu Val Ala Ala Ser Pro Thr
    290   295   300

Leu Ser Pro Arg Gln Ser Met Ile Ser Thr Gln Asn Gln Tyr Ser Thr
305   310   315   320

Leu Ser Lys Pro Ala Ala Leu Thr Gly Thr Leu Glu Val Arg Leu Met
            325   330   335

Gly Cys Gln Asp Ile Leu Glu Asn Val Pro Gly Arg Ser Lys Ala Thr
            340   345   350

Ser Val Ala Leu Pro Gly Trp Ser Pro Ser Glu Thr Arg Ser Ser Phe
    355   360   365

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Met Ser Arg Thr Ser Lys Ser Lys Ser Gly Ser Ser Arg Asn Leu Leu
    370             375             380

Lys Thr Asp Asp Leu Ser Asn Asp Val Cys Ala Val Leu Lys Leu Asp
385             390             395             400

Asn Thr Val Val Gly Gln Thr Ser Trp Lys Pro Ile Ser Asn Gln Ser
                405             410             415

Trp Asp Gln Lys Phe Thr Leu Glu Leu Asp Arg Ser Arg Glu Leu Glu
            420             425             430

Ile Ser Val Tyr Trp Arg Asp Trp Arg Ser Leu Cys Ala Val Lys Phe
            435             440             445

Leu Arg Leu Glu Asp Phe Leu Asp Asn Gln Arg His Gly Met Cys Leu
    450             455             460

Tyr Leu Glu Pro Gln Gly Thr Leu Phe Ala Glu Val Thr Phe Phe Asn
465             470             475             480

Pro Val Ile Glu Arg Arg Pro Lys Leu Gln Arg Gln Lys Lys Ile Phe
            485             490             495

Ser Lys Gln Gln Gly Lys Thr Phe Leu Arg Ala Pro Gln Met Asn Ile
            500             505             510

Asn Ile Ala Thr Trp Gly Arg Leu Val Arg Arg Ala Ile Pro Thr Val
            515             520             525

Asn His Ser Gly Thr Phe Ser Pro Gln Ala Pro Val Pro Thr Thr Val
    530             535             540

Pro Val Val Asp Val Arg Ile Pro Gln Leu Ala Pro Pro Ala Ser Asp
545             550             555             560

Ser Thr Val Thr Lys Leu Asp Phe Asp Leu Glu Pro Glu Pro Pro Pro
            565             570             575

Ala Pro Pro Arg Ala Ser Ser Leu Gly Glu Ile Asp Glu Ser Ser Glu
            580             585             590

Leu Arg Val Leu Asp Ile Pro Gly Gln Ala Ser His Phe Lys Pro Cys
            595             600             605

Ile Ile Pro Leu His
    610

<210>   167
<211>   133
<212>   PRT
<213>   Homo sapiens

<400>   167

Met Val Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser
1               5               10              15
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Glu Pro Leu Pro Ile Ala Asp Gly Asp Arg Arg Arg Lys Lys Lys Arg
            20              25              30

Arg Gly Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr
            35              40              45

Lys Leu Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln
    50              55              60

Gly Ala Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Ile Ile
65              70              75              80

Glu Lys Gln Ala Gly His Ser Arg Ser Arg Val Phe Arg Glu Val Glu
            85              90              95

Thr Leu Tyr Gln Cys Gln Gly Asn Lys Asn Ile Leu Glu Leu Ile Glu
            100             105             110

Phe Phe Glu Asp Asp Thr Arg Phe Tyr Leu Val Phe Glu Lys Leu Gln
            115             120             125

Gly Gly Thr Tyr Arg
    130

<210>   168
<211>   153
<212>   PRT
<213>   Homo sapiens

<400>   168

Met Leu Gln Val Gly Val Leu Arg Asp Arg Ser Pro Ala Gly Ala Ser
1               5               10              15

Glu Gly Phe His Val Arg Gly Arg Trp Arg Thr Glu Asp Cys His Leu
            20              25              30

Arg Thr Lys Ala Ile Glu Thr Leu Arg Val Ala Gly Arg His Gln Leu
            35              40              45

Pro Asp Arg Ser Phe Ile Ser Phe Gly Ile Ser Ser Leu Gln Met Val
    50              55              60

Ser Ser Gln Lys Leu Glu Lys Pro Ile Glu Met Gly Ser Ser Glu Pro
65              70              75              80

Leu Pro Ile Ala Asp Gly Asp Arg Arg Arg Lys Lys Lys Arg Arg Gly
            85              90              95

Arg Ala Thr Asp Ser Leu Pro Gly Lys Phe Glu Asp Met Tyr Lys Leu
            100             105             110

Thr Ser Glu Leu Leu Gly Glu Gly Ala Tyr Ala Lys Val Gln Gly Ala
            115             120             125

Val Ser Leu Gln Asn Gly Lys Glu Tyr Ala Val Lys Val Ser Val Ser
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        130                    135                      140

Ala Glu Cys Gln Ala Leu Leu Cys Lys
145                 150


<210>   169
<211>   231
<212>   PRT
<213>   Homo sapiens


<400>   169

Met Gly Ser Gly Met Lys Leu Asn Asn Ser Cys Thr Pro Ile Thr Thr
1               5                   10                  15

Pro Glu Leu Thr Thr Pro Cys Gly Ser Ala Glu Tyr Met Ala Pro Glu
            20              25                  30

Val Val Glu Val Phe Thr Asp Gln Ala Thr Phe Tyr Asp Lys Arg Cys
        35              40                  45

Asp Leu Trp Ser Leu Gly Val Val Leu Tyr Ile Met Leu Ser Gly Tyr
    50              55                  60

Pro Pro Phe Val Gly His Cys Gly Ala Asp Cys Gly Trp Asp Arg Gly
65              70                  75                  80

Glu Val Cys Arg Val Cys Gln Asn Lys Leu Phe Glu Ser Ile Gln Glu
            85                  90                  95

Gly Lys Tyr Glu Phe Pro Asp Lys Asp Trp Ala His Ile Ser Ser Glu
            100             105                 110

Ala Lys Asp Leu Ile Ser Lys Leu Leu Val Arg Asp Ala Lys Gln Arg
        115             120                 125

Leu Ser Ala Ala Gln Val Leu Gln His Pro Trp Val Gln Gly Gln Ala
    130             135                 140

Pro Glu Lys Gly Leu Pro Thr Pro Gln Val Leu Gln Arg Asn Ser Ser
145                 150                 155                 160

Thr Met Asp Leu Thr Leu Phe Ala Ala Glu Ala Ile Ala Leu Asn Arg
            165                 170                 175

Gln Leu Ser Gln His Glu Glu Asn Glu Leu Ala Glu Glu Pro Glu Ala
            180             185                 190

Leu Ala Asp Gly Leu Cys Ser Met Lys Leu Ser Pro Pro Cys Lys Ser
            195             200             205

Arg Leu Ala Arg Arg Arg Ala Leu Ala Gln Ala Gly Arg Gly Glu Asp
    210             215                 220

Arg Ser Pro Pro Thr Ala Leu
225                 230
```

<210> 170
<211> 146
<212> PRT
<213> Homo sapiens

<400> 170

Met Arg Lys Gly Val Leu Lys Asp Pro Glu Ile Ala Asp Leu Phe Tyr
1   5   10   15

Lys Asp Asp Pro Glu Glu Leu Phe Ile Gly Leu His Glu Ile Gly His
            20   25   30

Gly Ser Phe Gly Ala Val Tyr Phe Ala Thr Asn Ala His Thr Ser Glu
        35   40   45

Val Val Ala Ile Lys Lys Met Ser Tyr Ser Gly Lys Gln Thr His Glu
    50   55   60

Lys Trp Gln Asp Ile Leu Lys Glu Val Lys Phe Leu Arg Gln Leu Lys
65   70   75   80

His Pro Asn Thr Ile Glu Tyr Lys Gly Cys Tyr Leu Lys Glu His Thr
                85   90   95

Ala Trp Leu Val Met Glu Tyr Cys Leu Gly Ser Ala Ser Asp Leu Leu
            100   105   110

Glu Val His Lys Lys Pro Leu Gln Glu Val Glu Ile Ala Ala Ile Thr
            115   120   125

His Gly Ala Leu His Gly Leu Ala Tyr Leu His Ser His Ala Leu Ile
        130   135   140

His Arg
145

<210> 171
<211> 123
<212> PRT
<213> Homo sapiens

<400> 171

Met Met Glu Glu Leu His Ser Leu Asp Pro Arg Arg Gln Glu Leu Leu
1   5   10   15

Glu Ala Arg Phe Thr Gly Val Gly Val Ser Lys Gly Pro Leu Asn Ser
            20   25   30

Glu Ser Ser Asn Gln Ser Leu Cys Ser Val Gly Ser Leu Ser Asp Lys
        35   40   45

Glu Val Glu Thr Pro Glu Lys Lys Gln Asn Asp Gln Arg Asn Arg Lys
    50   55   60

Arg Lys Ala Glu Pro Tyr Glu Thr Ser Gln Gly Lys Gly Thr Pro Arg

Gly His Lys Ile Ser Asp Tyr Phe Glu Thr Ala Pro Leu Trp Phe Arg
                85   90   95

Trp Gln Cys Cys Lys Gly Gly Asn Arg Gly Ala Val Cys Ser Ala Asn
            100   105   110

Pro His Val Ser Asp Ala Ser Lys Thr Ser Ala
        115   120

<210> 172
<211> 478
<212> PRT
<213> Homo sapiens

<400> 172

Met Val Gly Ile Lys Glu Arg Pro Ser Ser Asn Leu Pro Cys Pro Pro
1   5   10   15

Leu Pro Pro Gln Thr Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg
            20   25   30

Leu Asp Ile Leu Leu Gly Thr Ala Arg Ala Ile Gln Phe Leu His Gln
        35   40   45

Asp Ser Pro Ser Leu Ile His Gly Asp Ile Lys Ser Ser Asn Val Leu
    50   55   60

Leu Asp Glu Arg Leu Thr Pro Lys Leu Gly Asp Phe Gly Leu Ala Arg
65   70   75   80

Phe Ser Arg Phe Ala Gly Ser Ser Pro Ser Gln Ser Ser Met Val Ala
            85   90   95

Arg Thr Gln Thr Val Arg Gly Thr Leu Ala Tyr Leu Pro Glu Glu Tyr
            100   105   110

Ile Lys Thr Gly Arg Leu Ala Val Asp Thr Asp Thr Phe Ser Phe Gly
        115   120   125

Val Val Val Leu Glu Thr Leu Ala Gly Gln Arg Ala Val Lys Thr His
    130   135   140

Gly Ala Arg Thr Lys Tyr Leu Lys Asp Leu Val Glu Glu Glu Ala Glu
145   150   155   160

Glu Ala Gly Val Ala Leu Arg Ser Thr Gln Ser Thr Leu Gln Ala Gly
            165   170   175

Leu Ala Ala Asp Ala Trp Ala Ala Pro Ile Ala Met Gln Ile Tyr Lys
            180   185   190

Lys His Leu Asp Pro Arg Pro Gly Pro Cys His Leu Ser Trp Ala Trp
        195   200   205

Ala Trp Ala Ser Trp Pro Ala Ala Ala Cys Thr Ala Gly Pro Lys Gly
    210   215   220

Arg Pro Pro Met Thr Gln Val Tyr Glu Arg Leu Glu Lys Leu Gln Ala
225   230   235   240

Val Val Ala Gly Val Pro Gly His Leu Glu Ala Ala Ser Cys Ile Pro
                245   250   255

Phe Pro Gln Glu Asn Ser Tyr Val Ser Ser Thr Gly Arg Ala His Ser
                260   265   270

Gly Ala Ala Pro Trp Gln Pro Leu Ala Ala Pro Ser Gly Ala Ser Ala
                275   280   285

Gln Ala Ala Glu Gln Leu Gln Arg Gly Pro Asn Gln Pro Val Glu Ser
    290   295   300

Asp Glu Ser Leu Gly Gly Leu Ser Ala Ala Leu Arg Ser Trp His Leu
305   310   315   320

Thr Pro Ser Cys Pro Leu Asp Pro Ala Pro Leu Arg Glu Ala Gly Cys
                325   330   335

Pro Gln Gly Asp Thr Ala Gly Glu Ser Ser Trp Gly Ser Gly Pro Gly
                340   345   350

Ser Arg Pro Thr Ala Val Glu Gly Leu Ala Leu Gly Ser Ser Ala Ser
                355   360   365

Ser Ser Ser Glu Pro Pro Gln Ile Ile Ile Asn Pro Ala Arg Gln Lys
    370   375   380

Met Val Gln Lys Leu Ala Leu Tyr Glu Asp Gly Ala Leu Asp Ser Leu
385   390   395   400

Gln Leu Leu Ser Ser Ser Ser Leu Pro Gly Leu Gly Leu Glu Gln Asp
                405   410   415

Arg Gln Gly Pro Lys Lys Val Met Asn Phe Arg Ala Asp Val Phe Thr
                420   425   430

Trp Ala Asp Pro Pro Asn Pro Glu Val Lys Val Leu Met Val Arg Ser
                435   440   445

Ser His Gly Ala Arg Val Leu Ser Thr Leu Pro Ala Val Gly Val Gly
    450   455   460

Ala His Ala Arg Trp Gly Glu Lys Glu Val Ala Leu Leu Phe
465   470   475

<210> 173
<211> 344
<212> PRT
<213> Homo sapiens

<400> 173

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Met Ala Gly Gly Pro Gly Pro Gly Glu Pro Ala Ala Pro Gly Ala Gln
1               5                   10              15

His Phe Leu Tyr Glu Val Pro Pro Trp Val Met Cys Arg Phe Tyr Lys
                20              25              30

Val Met Asp Ala Leu Glu Pro Ala Asp Trp Cys Gln Phe Ala Ala Leu
        35              40              45

Ile Val Arg Asp Gln Thr Glu Leu Arg Leu Cys Glu Arg Ser Gly Gln
    50              55              60

Arg Thr Ala Ser Val Leu Trp Pro Trp Ile Asn Arg Asn Ala Arg Val
65              70              75                      80

Ala Asp Leu Val His Ile Leu Thr His Leu Gln Leu Leu Arg Ala Arg
            85              90                      95

Asp Ile Ile Thr Ala Trp His Pro Pro Ala Pro Leu Pro Ser Pro Gly
            100             105             110

Thr Thr Ala Pro Arg Pro Ser Ser Ile Pro Ala Pro Ala Glu Ala Glu
        115             120             125

Ala Trp Ser Pro Arg Lys Leu Pro Ser Ser Ala Ser Thr Phe Leu Ser
    130             135             140

Pro Ala Phe Pro Gly Ser Gln Thr His Ser Gly Pro Glu Leu Gly Leu
145             150             155                     160

Val Pro Ser Pro Ala Ser Leu Trp Pro Pro Pro Pro Ser Pro Ala Pro
            165             170             175

Ser Ser Thr Lys Pro Gly Pro Glu Ser Ser Val Ser Leu Leu Gln Gly
        180             185             190

Ala Arg Pro Ser Pro Phe Cys Trp Pro Leu Cys Glu Ile Ser Arg Gly
    195             200             205

Thr His Asn Phe Ser Glu Glu Leu Lys Ile Gly Glu Gly Gly Phe Gly
    210             215             220

Cys Val Tyr Arg Ala Val Met Arg Asn Thr Val Tyr Ala Val Lys Arg
225             230             235             240

Leu Lys Glu Asn Ala Asp Leu Glu Trp Thr Ala Val Lys Gln Ser Phe
            245             250             255

Leu Thr Glu Val Glu Gln Leu Ser Arg Phe Arg His Pro Asn Ile Val
            260             265             270

Asp Phe Ala Gly Tyr Cys Ala Gln Asn Gly Phe Tyr Cys Leu Val Tyr
    275             280             285

Gly Phe Leu Pro Asn Gly Ser Leu Glu Asp Arg Leu His Cys Gln Thr
    290             295             300
```

Gln Ala Cys Pro Pro Leu Ser Trp Pro Gln Arg Leu Asp Ile Leu Leu
305   310   315   320

Gly Thr Ala Arg Ala Ser Gln Val Ser Cys Asn Arg Val Ser Ser Cys
                325   330   335

Val Ser Lys Ser Ser Pro Gly Leu
                340

<210>   174
<211>   336
<212>   PRT
<213>   Homo sapiens

<400>   174

Met Phe Thr Glu Glu Asp Val Lys Phe Tyr Leu Ala Glu Leu Ala Leu
1   5   10   15

Ala Leu Asp His Leu His Ser Leu Gly Ile Ile Tyr Arg Asp Leu Lys
                20   25   30

Pro Glu Asn Ile Leu Leu Asp Glu Glu Gly His Ile Lys Leu Thr Asp
            35   40   45

Phe Gly Leu Ser Lys Glu Ser Ile Asp His Glu Lys Lys Ala Tyr Ser
        50   55   60

Phe Cys Gly Thr Val Glu Tyr Met Ala Pro Glu Val Val Asn Arg Arg
65   70   75   80

Gly His Thr Gln Ser Ala Asp Trp Trp Ser Phe Gly Val Leu Met Phe
                85   90   95

Glu Met Leu Thr Gly Thr Leu Pro Phe Gln Gly Lys Asp Arg Lys Glu
            100   105   110

Thr Met Thr Met Ile Leu Lys Ala Lys Leu Gly Met Pro Gln Phe Leu
        115   120   125

Ser Pro Glu Ala Gln Ser Leu Leu Arg Met Leu Phe Lys Arg Asn Pro
    130   135   140

Ala Asn Arg Leu Gly Ala Gly Pro Asp Gly Val Glu Glu Ile Lys Arg
145   150   155   160

His Ser Phe Phe Ser Thr Ile Asp Trp Asn Lys Leu Tyr Arg Arg Glu
                165   170   175

Ile His Pro Pro Phe Lys Pro Ala Thr Gly Arg Pro Glu Asp Thr Phe
            180   185   190

Tyr Phe Asp Pro Glu Phe Thr Ala Lys Thr Pro Lys Asp Ser Pro Gly
        195   200   205

Ile Pro Pro Ser Ala Asn Ala His Gln Leu Phe Arg Gly Phe Ser Phe

Val Ala Ile Thr Ser Asp Asp Glu Ser Gln Ala Met Gln Thr Val Gly
225   230   235   240

Val His Ser Ile Val Gln Gln Leu His Arg Asn Ser Ile Gln Phe Thr
                       245   250   255

Asp Gly Tyr Glu Val Lys Glu Asp Ile Gly Val Gly Ser Tyr Ser Val
                       260   265   270

Cys Lys Arg Cys Ile His Lys Ala Thr Asn Met Glu Phe Ala Val Lys
                       275   280   285

Val Asn Phe Phe Tyr Leu Lys Cys Asn Ser Tyr Ser Ser Cys Ser Cys
                       290   295   300

Met Ser Val Pro Val Lys Asn Tyr Thr Pro Leu Val Val Lys Ser Ala
305   310   315   320

Phe Cys Tyr Lys Lys Val Lys Tyr Leu Ala Ser Asp Leu Gln Arg Ser
                       325   330   335

<210> 175
<211> 198
<212> PRT
<213> Homo sapiens

<400> 175

Met Pro Leu Ala Gln Leu Ala Asp Pro Trp Gln Lys Met Ala Val Glu
1   5   10   15

Ser Pro Ser Asp Ser Ala Glu Asn Gly Gln Gln Ile Met Asp Glu Pro
                       20   25   30

Met Gly Glu Glu Glu Ile Asn Pro Gln Thr Glu Glu Val Ser Ile Lys
                       35   40   45

Glu Ile Ala Ile Thr His His Val Lys Glu Gly His Glu Lys Ala Asp
                       50   55   60

Pro Ser Gln Phe Glu Leu Leu Lys Val Leu Gly Gln Gly Ser Phe Gly
65   70   75   80

Lys Val Phe Leu Val Lys Lys Ile Ser Gly Ser Asp Ala Arg Gln Leu
                       85   90   95

Tyr Ala Met Lys Val Leu Lys Lys Ala Thr Leu Lys Val Arg Asp Arg
                       100   105   110

Val Arg Thr Lys Met Glu Arg Asp Ile Leu Val Glu Val Asn His Pro
                       115   120   125

Phe Ile Val Lys Leu His Tyr Ala Phe Gln Thr Glu Gly Lys Leu Tyr
                       130   135   140

Leu Ile Leu Asp Phe Leu Arg Gly Gly Asp Leu Phe Thr Arg Leu Ser
145   150   155   160

Lys Glu Val Met Phe Thr Glu Glu Asp Val Lys Phe Tyr Leu Ala Glu
                165   170   175

Leu Ala Leu Ala Leu Asp His Leu His Ser Leu Gly Ile Ile Tyr Arg
            180   185   190

Asp Leu Lys Pro Glu Lys
        195

<210> 176
<211> 489
<212> PRT
<213> Homo sapiens

<400> 176

Met Ser Thr Glu Ala Asp Glu Gly Ile Thr Phe Ser Val Pro Pro Phe
1   5   10   15

Ala Pro Ser Gly Phe Cys Thr Ile Pro Glu Gly Gly Ile Cys Arg Arg
            20   25   30

Gly Gly Ala Ala Ala Val Gly Glu Gly Glu Glu His Gln Leu Pro Pro
        35   40   45

Pro Pro Pro Gly Ser Phe Trp Asn Val Glu Ser Ala Ala Ala Pro Gly
    50   55   60

Ile Gly Cys Pro Ala Ala Thr Ser Ser Ser Ser Ala Thr Arg Gly Arg
65   70   75   80

Gly Ser Ser Val Gly Gly Gly Ser Arg Arg Thr Thr Val Ala Tyr Val
            85   90   95

Ile Asn Glu Ala Ser Gln Gly Gln Leu Val Val Ala Glu Ser Glu Ala
            100   105   110

Leu Gln Ser Leu Arg Glu Ala Cys Glu Thr Val Gly Ala Thr Leu Glu
        115   120   125

Thr Leu His Phe Gly Lys Leu Asp Phe Gly Glu Thr Thr Val Leu Asp
    130   135   140

Arg Phe Tyr Asn Ala Asp Ile Ala Val Val Glu Met Ser Asp Ala Phe
145   150   155   160

Arg Gln Pro Ser Leu Phe Tyr His Leu Gly Val Arg Glu Ser Phe Ser
            165   170   175

Met Ala Asn Asn Ile Ile Leu Tyr Cys Asp Thr Asn Ser Asp Ser Leu
            180   185   190

Gln Ser Leu Lys Glu Ile Ile Cys Gln Lys Asn Thr Met Cys Thr Gly
        195   200   205

Asn Tyr Thr Phe Val Pro Tyr Met Ile Thr Pro His Asn Lys Val Tyr
    210   215   220

Cys Cys Asp Ser Ser Phe Met Lys Gly Leu Thr Glu Leu Met Gln Pro
225   230   235   240

Asn Phe Glu Leu Leu Leu Gly Pro Ile Cys Leu Pro Leu Val Asp Arg
            245   250   255

Phe Ile Gln Leu Leu Lys Val Ala Gln Ala Ser Ser Ser Gln Tyr Phe
            260   265   270

Arg Glu Ser Ile Leu Asn Asp Ile Arg Lys Ala Arg Asn Leu Tyr Thr
        275   280   285

Gly Lys Glu Leu Ala Ala Glu Leu Ala Arg Ile Arg Gln Arg Val Asp
    290   295   300

Asn Ile Glu Val Leu Thr Ala Asp Ile Val Ile Asn Leu Leu Leu Ser
305   310   315   320

Tyr Arg Asp Ile Gln Asp Tyr Asp Ser Ile Val Lys Leu Val Glu Thr
            325   330   335

Leu Glu Lys Leu Pro Thr Phe Asp Leu Ala Ser His His His Val Lys
            340   345   350

Phe His Tyr Ala Phe Ala Leu Asn Arg Arg Asn Leu Pro Gly Asp Arg
        355   360   365

Ala Lys Ala Leu Asp Ile Met Ile Pro Met Val Gln Ser Glu Gly Gln
    370   375   380

Val Ala Ser Asp Met Tyr Cys Leu Val Gly Arg Ile Tyr Lys Asp Met
385   390   395   400

Phe Leu Asp Ser Asn Phe Thr Asp Thr Glu Ser Arg Asp His Gly Ala
            405   410   415

Ser Trp Phe Lys Lys Ala Phe Glu Ser Glu Pro Thr Leu Gln Ser Gly
            420   425   430

Ile Asn Tyr Ala Val Leu Leu Leu Ala Ala Gly His Gln Phe Glu Ser
        435   440   445

Ser Phe Glu Leu Arg Lys Val Gly Asn Tyr Asn Leu Asn Phe Tyr Met
    450   455   460

Glu Ile Lys Lys Leu Gly Pro Asn Leu Val Gln Arg Arg Ile Ser Ala
465   470   475   480

Asp Ser Asp Gly Ser Pro Gly Phe Val
                485

<210>   177
<211>   105

<212> PRT
<213> Homo sapiens

<400> 177

```
Met Arg Glu Phe Glu Val Leu Lys Lys Leu Asn His Lys Asn Ile Val
1               5                   10                  15

Lys Leu Phe Ala Ile Glu Glu Glu Thr Thr Thr Arg His Lys Val Leu
            20                  25                  30

Ile Met Glu Phe Cys Pro Cys Gly Ser Leu Tyr Thr Val Leu Glu Glu
        35                  40                  45

Pro Ser Asn Ala Tyr Gly Leu Pro Glu Ser Glu Phe Leu Ile Val Leu
        50                  55                  60

Arg Asp Val Val Gly Gly Met Asn His Leu Arg Glu Asn Gly Ile Val
65                  70                  75                  80

His Arg Asp Ile Lys Pro Gly Asn Ile Met Arg Ala Leu Tyr His Ser
                85                  90                  95

Leu Val Asp Asp Ser Phe His Pro Pro
                100                 105
```

<210> 178
<211> 413
<212> PRT
<213> Homo sapiens

<220>
<221> -
<222> (1)..(413)
<223> "XAA" can be any amino acid

<400> 178

```
Met Tyr Cys Phe Gly Arg Lys Xaa Tyr Ile Ser Thr Arg Pro Cys Phe
1               5                   10                  15

Pro Asn Lys Thr Cys Gln Lys Met Leu Ile Ile Leu Thr Ser Ala Leu
            20                  25                  30

Gln Ile Ala His Arg Cys Ile Cys Arg Ile Leu Leu Gly Ser Arg Val
        35                  40                  45

Leu Ala Ala Lys Ala Ser Gly Asn Cys Thr Leu Asn Ser Glu Asp Phe
        50                  55                  60

Ile Phe Asn Ile Gly Ser Ala Ala Tyr Asp Ala Val Leu Asp Arg Asn
65                  70                  75                  80

Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln Thr His Ala
                85                  90                  95
```

```
Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val Asn His Lys
        100                 105                 110

Asn Ile Ile Ser Leu Leu Asn Val Phe Thr Pro Gln Lys Thr Leu Glu
        115                 120                 125

Glu Phe Gln Asp Val Tyr Leu Val Met Glu Leu Met Asp Ala Asn Leu
        130                 135                 140

Cys Gln Val Ile Gln Met Glu Leu Asp His Glu Arg Met Ser Tyr Leu
145                 150                 155                 160

Leu Tyr Gln Met Leu Cys Gly Ile Lys His Leu His Ser Ala Gly Ile
                165                 170                 175

Ile His Arg Asp Leu Lys Pro Ser Asn Ile Val Val Lys Ser Asp Cys
                180                 185                 190

Thr Leu Lys Ile Leu Asp Phe Gly Leu Ala Arg Thr Ala Gly Thr Ser
                195                 200                 205

Phe Met Met Thr Pro Tyr Val Val Thr Arg Tyr Tyr Arg Ala Pro Glu
        210                 215                 220

Val Ile Leu Gly Met Gly Tyr Lys Glu Asn Val Asp Ile Trp Ser Val
225                 230                 235                 240

Gly Cys Ile Met Gly Glu Met Val Arg His Lys Ile Leu Phe Pro Gly
                245                 250                 255

Arg Asp Tyr Ile Asp Gln Trp Asn Lys Val Ile Glu Gln Leu Gly Thr
                260                 265                 270

Pro Cys Pro Glu Phe Met Lys Lys Leu Gln Pro Thr Val Arg Asn Tyr
                275                 280                 285

Val Glu Asn Arg Pro Lys Tyr Ala Gly Leu Thr Phe Pro Lys Leu Phe
        290                 295                 300

Pro Asp Ser Leu Phe Pro Ala Asp Ser Glu His Asn Lys Leu Lys Ala
305                 310                 315                 320

Ser Gln Ala Arg Asp Leu Leu Ser Lys Met Leu Val Ile Asp Pro Ala
                325                 330                 335

Lys Arg Ile Ser Val Asp Asp Ala Leu Gln His Pro Tyr Ile Asn Val
                340                 345                 350

Trp Tyr Asp Pro Ala Glu Val Glu Ala Pro Pro Pro Gln Ile Tyr Asp
                355                 360                 365

Lys Gln Leu Asp Glu Arg Glu His Thr Ile Glu Glu Trp Lys Glu Leu
        370                 375                 380

Ile Tyr Lys Glu Val Met Asn Ser Glu Glu Lys Thr Lys Asn Gly Val
385                 390                 395                 400
```

Val Lys Gly Gln Pro Ser Pro Ser Ala Gln Val Gln Gln
                405   410

<210> 179
<211> 108
<212> PRT
<213> Homo sapiens

<400> 179

Met Ser Lys Ser Lys Val Asp Asn Gln Phe Tyr Ser Val Glu Val Gly
1   5   10   15

Asp Ser Thr Phe Thr Val Leu Lys Arg Tyr Gln Asn Leu Lys Pro Ile
            20   25   30

Gly Ser Gly Ala Gln Gly Ile Val Cys Ala Ala Tyr Asp Ala Val Leu
            35   40   45

Asp Arg Asn Val Ala Ile Lys Lys Leu Ser Arg Pro Phe Gln Asn Gln
        50   55   60

Thr His Ala Lys Arg Ala Tyr Arg Glu Leu Val Leu Met Lys Cys Val
65   70   75   80

Asn His Lys Asn Val Ser Phe Val Ile Phe Lys Leu Leu Ala Val Gly
                85   90   95

Val Cys Lys Ile Gly Lys Arg Lys Cys Val Cys Thr
            100   105

<210> 180
<211> 336
<212> PRT
<213> Homo sapiens

<400> 180

Met Ala Met Thr Gly Ser Thr Pro Cys Ser Ser Met Ser Asn His Thr
1   5   10   15

Lys Glu Arg Val Thr Met Thr Lys Val Thr Leu Glu Asn Phe Tyr Ser
            20   25   30

Asn Leu Ile Ala Gln His Glu Glu Arg Glu Met Arg Gln Lys Lys Leu
            35   40   45

Glu Lys Val Met Glu Glu Glu Gly Leu Lys Asp Glu Glu Lys Arg Leu
        50   55   60

Arg Arg Ser Ala His Ala Arg Lys Glu Thr Glu Phe Leu Arg Leu Lys
65   70   75   80

Arg Thr Arg Leu Gly Leu Glu Asp Phe Glu Ser Leu Lys Val Ile Gly
                85   90   95

Arg Gly Ala Phe Gly Glu Val Arg Leu Val Gln Lys Lys Asp Thr Gly

```
              100                 105                 110

His Val Tyr Ala Met Lys Ile Leu Arg Lys Ala Asp Met Leu Glu Lys
        115               120               125

Glu Gln Val Gly His Ile Arg Ala Glu Arg Asp Ile Leu Val Glu Ala
        130               135               140

Asp Ser Leu Trp Val Val Lys Met Phe Tyr Ser Phe Gln Asp Lys Leu
145               150               155               160

Asn Leu Tyr Leu Ile Met Glu Phe Leu Pro Gly Gly Asp Met Met Thr
                165               170               175

Leu Leu Met Lys Lys Asp Thr Leu Thr Glu Glu Glu Thr Gln Phe Tyr
            180               185               190

Ile Ala Glu Thr Val Leu Ala Ile Asp Ser Ile His Gln Leu Gly Phe
        195               200               205

Ile His Arg Asp Ile Lys Pro Asp Asn Leu Leu Leu Asp Ser Lys Gly
    210               215               220

His Val Lys Leu Ser Asp Phe Gly Leu Cys Thr Gly Leu Lys Lys Ala
225               230               235               240

His Arg Thr Glu Phe Tyr Arg Asn Leu Asn His Ser Leu Pro Ser Asp
                245               250               255

Phe Thr Phe Gln Asn Met Asn Ser Lys Arg Lys Ala Glu Thr Trp Lys
                260               265               270

Arg Asn Arg Arg Gln Leu Ala Phe Ser Thr Val Gly Thr Pro Asp Tyr
        275               280               285

Ile Ala Pro Glu Val Phe Met Gln Thr Gly Tyr Asn Lys Leu Cys Asp
    290               295               300

Trp Trp Ser Leu Gly Val Ile Met Tyr Glu Met Leu Ile Gly Lys Leu
305               310               315               320

His Gly Phe Arg Gly Leu Phe Leu Cys Ile His Asp Arg Leu Leu His
            325               330               335
```

<210> 181
<211> 415
<212> PRT
<213> Homo sapiens

<220>
<221> -
<222> (1)..(415)
<223> "XAA " can be any amino acid

<400> 181

```
Xaa Arg His Glu Ser Ala Arg Ala Ala Arg Val Ser Gly Gly Ser Met
1               5                   10              15

Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu His Lys Asn Gly
            20              25              30

Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys Glu Val Leu Glu
        35              40              45

Gly Leu Asp Tyr Leu His Arg Asn Gly Gln Ile His Arg Asp Leu Lys
    50              55              60

Ala Gly Asn Ile Leu Leu Gly Glu Asp Gly Ser Val Gln Ile Ala Asp
65              70              75              80

Phe Gly Val Ser Ala Phe Leu Ala Thr Gly Gly Asp Val Thr Arg Asn
            85              90              95

Lys Val Arg Lys Thr Phe Val Gly Thr Pro Cys Trp Met Ala Pro Glu
        100             105             110

Val Met Glu Gln Val Arg Gly Tyr Asp Phe Lys Ala Asp Met Trp Ser
        115             120             125

Phe Gly Ile Thr Ala Ile Glu Leu Ala Thr Gly Ala Ala Pro Tyr His
    130             135             140

Lys Tyr Pro Pro Met Lys Val Leu Met Leu Thr Leu Gln Asn Asp Pro
145             150             155             160

Pro Thr Leu Glu Thr Gly Val Glu Asp Lys Glu Met Met Lys Lys Tyr
            165             170             175

Gly Lys Ser Phe Arg Lys Leu Leu Ser Leu Cys Leu Gln Lys Asp Pro
            180             185             190

Ser Lys Arg Pro Thr Ala Ala Glu Leu Leu Lys Cys Lys Phe Phe Gln
        195             200             205

Lys Ala Lys Asn Arg Glu Tyr Leu Ile Glu Lys Leu Leu Thr Arg Thr
    210             215             220

Pro Asp Ile Ala Gln Arg Ala Lys Lys Val Arg Arg Val Pro Gly Ser
225             230             235             240

Ser Gly His Leu His Lys Thr Glu Asp Gly Asp Trp Glu Trp Ser Asp
            245             250             255

Asp Glu Met Asp Glu Lys Ser Glu Glu Gly Lys Ala Ala Phe Ser Gln
            260             265             270

Glu Lys Ser Arg Arg Val Lys Glu Glu Asn Pro Glu Ile Ala Val Ser
        275             280             285

Ala Ser Thr Ile Pro Glu Gln Ile Gln Ser Leu Ser Val His Asp Ser
    290             295             300
```

Gln Gly Pro Pro Asn Ala Asn Glu Asp Tyr Arg Glu Ala Ser Ser Cys
305   310   315   320

Ala Val Asn Leu Val Leu Arg Leu Arg Asn Ser Arg Lys Glu Leu Asn
            325   330   335

Asp Ile Arg Phe Glu Phe Thr Pro Gly Arg Asp Thr Ala Asp Gly Val
            340   345   350

Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly His Asp Val Val
        355   360   365

Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp Pro Lys Ala Leu
        370   375   380

Lys Thr Leu Thr Phe Lys Leu Ala Ser Gly Cys Asp Gly Ser Glu Ile
385   390   395   400

Pro Asp Glu Val Lys Leu Ile Gly Phe Ala Gln Leu Ser Val Ser
            405   410   415

<210>   182
<211>   409
<212>   PRT
<213>   Homo sapiens

<220>
<221>   -
<222>   (1)..(409)
<223>   "Xaa" can be any amino acid

<400>   182

Xaa Arg His Glu Ser Ala Arg Ala Ala Arg Val Ser Gly Gly Ser Met
1   5   10   15

Leu Asp Ile Ile Lys Tyr Ile Val Asn Arg Gly Glu His Lys Asn Gly
            20   25   30

Val Leu Glu Glu Ala Ile Ile Ala Thr Ile Leu Lys Glu Val Leu Glu
        35   40   45

Gly Leu Asp Tyr Leu His Arg Asn Gly Gln Ile His Arg Asp Leu Lys
        50   55   60

Ala Gly Asn Ile Leu Leu Gly Glu Asp Gly Ser Val Gln Ile Ala Asp
65   70   75   80

Phe Gly Val Ser Ala Phe Leu Ala Thr Gly Gly Asp Val Thr Arg Asn
            85   90   95

Lys Val Arg Lys Thr Phe Val Gly Thr Pro Cys Trp Met Ala Pro Glu
            100   105   110

Val Met Glu Gln Val Arg Gly Tyr Asp Phe Lys Ala Asp Met Trp Ser
        115   120   125

```
Phe Gly Ile Thr Ala Ile Glu Leu Ala Thr Gly Ala Ala Pro Tyr His
    130                 135             140

Lys Tyr Pro Pro Met Lys Val Leu Met Leu Thr Leu Gln Asn Asp Pro
145             150             155                 160

Pro Thr Leu Glu Thr Gly Val Glu Asp Lys Glu Met Met Lys Lys Tyr
                165             170             175

Gly Lys Ser Phe Arg Lys Leu Leu Ser Leu Cys Leu Gln Lys Asp Pro
            180             185             190

Ser Lys Arg Pro Thr Ala Ala Glu Leu Leu Lys Cys Lys Phe Phe Gln
        195             200             205

Lys Ala Lys Asn Arg Glu Tyr Leu Ile Glu Lys Leu Leu Thr Arg Thr
    210             215             220

Pro Asp Ile Ala Gln Arg Ala Lys Lys Val Arg Arg Val Pro Gly Ser
225             230             235                 240

Ser Gly His Leu His Lys Thr Glu Asp Gly Asp Trp Glu Trp Ser Asp
            245             250             255

Asp Glu Met Asp Glu Lys Ser Glu Glu Gly Lys Ala Ala Phe Ser Gln
            260             265             270

Glu Lys Ser Arg Arg Val Lys Glu Glu Asn Pro Glu Ile Ala Val Ser
        275             280             285

Ala Ser Thr Ile Pro Glu Gln Ile Gln Ser Leu Ser Val His Asp Ser
    290             295             300

Gln Gly Pro Pro Asn Ala Asn Glu Asp Tyr Arg Glu Ala Ser Ser Cys
305             310             315                 320

Ala Val Asn Leu Val Leu Arg Leu Arg Asn Ser Arg Lys Glu Leu Asn
            325             330             335

Asp Ile Arg Phe Glu Phe Thr Pro Gly Arg Asp Thr Ala Asp Gly Val
            340             345             350

Ser Gln Glu Leu Phe Ser Ala Gly Leu Val Asp Gly His Asp Val Val
            355             360             365

Ile Val Ala Ala Asn Leu Gln Lys Ile Val Asp Asp Pro Lys Ala Leu
    370             375             380

Lys Thr Leu Thr Phe Lys Leu Asn Gln Phe Leu His Leu Glu Ala Phe
385             390             395                 400

Asp Ser Ala Ala Leu Gly Asn Val Phe
            405
```